

**THE INFLUENCE FACTORS OF COMPETITIVENESS IN QUALITY AMONG
PRIVATE HIGHER EDUCATION INSTITUTIONS (PHEIs) IN MALAYSIA:
THE ROLE OF GREEN INITIATIVES AS A MEDIATOR**

By

CHAN HON SENG

**Dissertation submitted in partial fulfillment of the requirements for the degree of
Master of Business Administration**

UNIVERSITI SAINS MALAYSIA

2012



GRADUATE SCHOOL OF BUSINESS (GSB)
UNIVERSITI SAINS MALAYSIA

DECLARATION

I hereby declare that the project is based on my original work except for quotations and citation which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at USM or any other institutions.

(Signature):

Name: CHAN HON SENG

Date: 28/6/2012

ACKNOWLEDGEMENT

I would like to express my deep appreciation to my supervisor, Dr. Tan Cheng Ling, for her guidance, enthusiasm, support and valuable advice during the process of this research and writing up of this thesis. I would like to express my thanks to Dr. Goh Yen Nee, my co-supervisor who provided a lot of guidance in helping me to produce a good research.

I would also like to thank all the respondents for this study questionnaire, which provide valuable data to enable the research findings for this research. I would also like to express my thanks to my course mates, especially Lim Pei Fern who has provided me support and advice in helping me completing this thesis.

I would like to thank my parents for giving me support and motivation in doing this thesis. Finally, I would like to thank all whose has given direct and indirect support in helping me to complete my thesis in time. I will be forever indebted to you.

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ABSTRAK

Tujuan kajian ini adalah untuk: (a) menyelidik faktor-faktor mempengaruhi kualiti daya saing Institusi Pengajian Tinggi Swasta (IPTS) di Malaysia; dan (b) menyiasat sama ada inisiatif alam sekitar bertindak sebagai pengantara dalam hubungan di atas. Faktor-faktor terdiri daripada sokongan pengurusan atasan, sokongan kerajaan, tekanan pihak berkepentingan, sokongan fakulti dan pematuhan peraturan. Empat hubungan utama hipotesis dianalisis ke atas sampel 138 IPTS yang terletak di seluruh Malaysia. Data dikumpul melalui soal selidik dalam talian. Dari sudut analisis statistik pandangan, faktor-faktor telah didapati untuk menyediakan lima dimensi sebagai teori. Hasil regresi hierarki menunjukkan bahawa lima faktor adalah positif dan signifikan mempengaruhi daya saing IPTS dalam kualiti. Semua pembolehubah faktor kecuali pematuhan peraturan yang positif dan signifikan mempengaruhi IPTS inisiatif hijau. Di samping itu, inisiatif hijau juga mempengaruhi IPTS untuk menjadi daya saing dalam kualiti. Inisiatif hijau sepenuhnya pengantara hubungan antara tekanan pemegang kepentingan dan daya saing dalam kualiti manakala sebahagian pengantara hubungan antara sokongan pengurusan atasan dan sokongan fakulti dengan daya saing dalam kualiti. Walau bagaimanapun, hubungan antara sokongan kerajaan dan daya saing dalam kualiti tidak diselesaikan oleh inisiatif hijau. Kajian ini termasuk implikasi teori dan praktikal serta sekatan dan cadangan untuk kajian akan datang.

ABSTRACT

The aims of this study were to: (a) examine the influence factors on the Malaysia Private Higher Education Institutions (PHEIs) competitiveness in quality; and (b) investigate whether green initiatives serve as a mediator in the relationship. Influence factors comprise top management support, government support, stakeholder pressure, and faculty support and regulation compliance. Four main hypothesized relationships were analyzed on a sample of 138 PHEIs located across Malaysia. Data were gathered through online questionnaires. From statistical analysis point of view, influence factors were found to provide five dimensions as theorized. Hierarchical regressions result showed that five influence factors were positively and significantly influence PHEIs competitiveness in quality. All variable of influence factors except regulation compliance was positively and significantly influence PHEIs green initiatives. In addition, green initiatives also influence the PHEIs to become competitiveness in quality. Green initiatives fully mediate the relationship between stakeholder pressure and competitiveness in quality while partially mediate the relationship between top management support and faculty support with competitiveness in quality. However, the relationship between government support and competitiveness in quality was not mediated by green initiatives. This study included the theoretical and practical implications as well as limitation and suggestion for future studies.

CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter introduces the research outline of the study. It begins with the background of the study, problem statement followed by research objectives and research questions. Definition of key terms of the study variables will be included to enhance understanding. This chapter will end with the significance of the study.

1.1 Background of Study

1.1.1 Development of Private Higher Education Institutions (PHEIs) in Malaysia

In general, higher education institutions (HEIs) are categorized into public HEIs and private HEIs. These institutions offer undergraduate, postgraduate and diploma programs. There are a total of 452 PHEIs in Malaysia, established between 1962 and 2009. These institutions are offering various types of programmes (MOHE, 2008). PHEIs played an important role in economic development that provide human resources development, high skills training and the application and acquisition of new knowledge (Basir, 2010).

There is an increasing number of PHEIs set up in Malaysia to support the tertiary education. PHEIs are important in helping Malaysia to be an educational hub in Asian region (Arokiasamy, Ismail, Ahmad and Othman, 2009). The development of the higher education sector in Malaysia, especially in PHEIs looks encouraging because of the increasing number of institutions in recent years. Nine Malaysian Plan (2006-2010) set a goal to achieve 40 percent of participation from the group age of 17-23 years enrolled in tertiary education by 2010. In 2005, it is estimated that 731698 students enrolled in PHEIs. The enrolment is expected to rise to 1,326,340 students by 2010 and student enrolment is projected to increase

to 2,267,800 students by 2020. PHEIs play a vital role to increase the number of tertiary education population (Arokiasamy et al., 2009).

In addition, there are also some branch campuses of foreign universities in the country, e.g. the campuses of Monash University and the University of Nottingham. There are also local private universities owned by individual's owners. In brief, there are a total of 452 PHEIs including university, college university and college at this moment to support the tertiary education demand in such a rapidly developing country. Details of the PHEIs according to the location in Malaysia are summarized in Table 1.1 and Table 1.2 summarized the number of PHEIs according to its types.

Table 1.1: Number PHEIs according to its location in Malaysia

State	Total PHEIs	University	College University	College	Foreign University
Selangor	123	19	10	92	2
Kuala Lumpur	119	8	6	105	0
Sarawak	34	1	0	31	2
Johor	33	1	1	30	1
Penang	30	1	1	28	0
Perak	29	5	0	24	0
Sabah	24	0	1	23	0
Negeri Sembilan	23	2	2	19	0
Melaka	19	2	1	16	0
Pahang	15	1	1	13	0
Terengganu	13	1	1	11	0
Kedah	12	3	2	7	0
Kelantan	10	0	1	9	0
Perlis	2	0	0	2	0

(Source: Higher Education Statistics retrieved from MOHE)

Table 1.2: Number of PHEIs types in Malaysia

Private Higher Education Institutions	No.
University	23
College University	21
College	403
Foreign University	5

(Source: Higher Education Statistics retrieved from MOHE)

Academic development in Malaysia is important following the establishment of the Malaysian Ministry of Higher Learning in March 2004 and can be considered as a progressive step in the country. This establishment proved that the government efforts strengthening and developing the tertiary education sector. The policy of the new ministry is closely associated with efforts to improve academic quality and be the core element in the PHEIs operation towards the students (Hassan, Asimiran, Rahman and Kamarudin 2008).

1.1.2 Sustainability in Private Higher Education Institutions (PHEIs)

The force of change is now acting upon the higher education institutions due to environmental issues. Regardless government, public, and private organizations have adopted sustainability as a guiding principle in an attempt to simultaneously address environmental, social, and economic concerns (Meadowcroft, 2005). Today, international organizations recognize education as vital to the pursuit of sustainability (United Nations, 2007). Institutions of higher education therefore have a special place in the international vision for a sustainable future and play a unique and important role in society. They are leaders, innovators, and problem-solvers. Similarly, a sustainable education institution is a "PHEIs, that involves, addresses and promotes the minimization of negative economic, environmental, social, and health effects generated from the consumption of resources in order to accomplish its functions of research, teaching and partnership, and stewardship in ways to help society make the transition to a sustainable lifestyles" (Velazquez et al., 2006).

The common sustainability themes impacting higher education as seen across various historical declarations and institutional policies include sustainable operations, sustainable academic research, ethical, environmental literacy, and moral responsibility, cooperation among PHEIs and governments, the development of interdisciplinary curriculum,

partnerships with government, NGOs, and industry, and public outreach (Wright, 2002). Establishing themes might help colleges and universities focus their efforts on specific issues which include, but are not limited to climate change or global warming, water use, conservation and natural resource protection, the green economy, renewable and alternative energy, food and recycling, green building, engineering, and planning, transportation, academics and curriculum, academic accessibility, academic administration and policy change, and sustainability's social impact. The diversity of these issues demonstrates the broad and meaningful impact that sustainability has on higher education institutions.

Green initiatives are based on the PHEIs environmental goals and targets with management's concept of sustainability because it presents diverging interpretations according to the actors that are inferred (Lourdel, et al., 2005). Some campus claimed that a sustainable institution is just having a environmental plan, master plan, environmental guidelines (Velazquez, et al., 2006) and some believe that they have met the challenge of sustainability through the signing of national or international declarations (Shriberg, et al., 2002), others create own institutional policies and employ green building initiative, ISO 14001, environmental stewardship, EIA projects, EMAS or environmental protection as a method of achieving sustainability. Scientists and professionals with diverse background and varying notions of sustainability also carry out the planning and implementation of the sustainability initiatives.

In noting the impact that sustainability has on higher education campuses, the responsibility for these institutions to act has been articulated. Shriberg (2002b), and McIntosh, Gaalswyk, Keniry, and Eagan (2008), suggested that PHEIs have the responsibility to be become sustainable leaders. Shriberg (2002b) concluded that colleges and universities have this responsibility because they (1) have the expertise and ability, (2) have the social and ethical obligation, (3) have the responsibility to model sustainable activity, (4) are problem-

causers themselves, and (5) can reap influential benefits for their image. Furthermore, PHEIs carry a deep responsibility to increase the awareness, knowledge skills to produce a sustainable future and these institutions, because of their diversified impact, play a critical role in making this happen. PHEIs can teach and demonstrate the principles of stewardship and awareness for greening their campuses. Cortese (2003) added that regardless of a moral obligation, PHEIs prepared most of the professionals who lead, develop, work in, manage, teach, and influence society's institutions but the people coming out of the world's best institutions are creating unsustainable practices (Cortese, 2003).

The desire for environmental sustainability in PHEIs has been stressed in many articles (Viebahn, 2002; Shriberg, 2002; Corcoran, 2002). Several activities and complex operations from PHEIs with potential environmental impacts have been overlooked in terms of social and environmental responsibility. Many PHEIs activities and operations require monitoring for significant environmental impacts, which include buildings and grounds maintenance, workshops and laboratory use as well as energy and materials use. PHEIs can be compared to buildings such as hotels and hospitals in terms of waste generation, water and materials intake, as well as electricity and hydrocarbon fuels consumption in operating machineries, heating and lighting, and transportation.

Bernheim (2003) stressed that academic institutions are an integral part of the high-consumption, automobile-intensive and waste-intensive global landscape. The unsustainable and intensified demand for water, land and other resources as a result of rapid growth of PHEIs population and the expansion of campus lead to increased dilapidation of the ecosystems and erode the life supporting systems. Concerned for natural resources is a vital response of the community to ensure its own survival and well-being because environmental resources management is a necessary foundation for sustainable development.

PHEIs also make a significant contribution to the development of our society, and, therefore, have a special societal responsibility, in particular with regard to youth training and public awareness about sustainability. Therefore, PHEIs should promote a pattern of development that would be compatible with a safe environment, biodiversity, ecological balance, and intergenerational equity. As sustainability concept is applied to PHEIs, it should serve as a means of configuring the campus and its various activities so that its members and its economies are able to meet their needs and express their greatest potential in the present planning and acting for the ability to maintain these ideals in a very long-term (Viebahn, 2002).

1.1.3 Competitiveness of Private Higher Learning Institutions (PHEIs)

Nowadays, students have variable option in competitive academic environment. Determinants that enable educational institutions to attract and retain students should be seriously studied. PHEIs, which intent to gain competitive edge in the future may need to search for effective and creative ways to attract, retain and foster stronger relationships with its students. As a private organization, it has to depend on the interaction and mechanism of the market. Hence, competition to woo students may become more intense. To make the matter harder, as a private institution, it does not have the privilege to receive any subsidies or financial assistances from the government (Teo, 2001).

The PHEIs, just like private concerns, see the dire need to gain competitive edge due to stiff competition and pressure to face globalization. This is imperative to many countries and Malaysia is no exception as the country aspires to become the regional education hub of Asia. The Malaysian PHEIs play a significant role in the development of the nation's workforce and the economy in general, particularly after 1996 where private universities

were established along with the public-owned tertiary institutions to provide more opportunities for Malaysians to pursue higher education within the country (Ramachandran et al., 2009).

The government of Malaysia has for long not compromised on the quality of education offered and hope that the PHEIs will provide a quality education which is in-synchronization with the current trend in education industry to the students (“We won’t compromise”, 2001).

The Ninth Plan (2006-2010) provides a series of measures to improve the quality of education, mainly through increased coverage and utilization of ICT, the introduction of a quality assurance system, and improvement in infrastructure facilities (World Bank Report, 2007). With Malaysia’s transition to a knowledge-based economy, policy makers linked the development of the PHEIs to the requirements of economic growth. The aim was to articulate a complementary policy to establish a world-class educational system to create Malaysia a regional education hub (Sohail et al., 2009).

PHEIs can raise their level of competitiveness by enhancing the quality of their output or by offering additional inducements to the students of their outputs (Stafford, 2010). For example, students may be willing to pay a higher tuition if the campus is environmentally sustainable (Mcfeeters, 2009). There are increasing pressures on PHEIs to be competitive in the global economy. This is evident with the increasing efficiency to drive up quality and the increasing of sensitivity of PHEIs to the problems and changes in that realm (Altbach, 2004).

1.1.4 Green Initiatives in Malaysia Private Higher Education Institutions (PHEIs).

Numerous activities that reflect the environmental concerns are carried out by private higher education institutions (PHEIs) in Malaysia. Open University Malaysia (OUM) launched a Green Campus initiative in collaboration with the Awana Genting Highlands Golf and Country Resort. Through the green initiative, the University hopes to groom a society that is committed to a sustainable environment through greater awareness and better earth-friendly practices. Under the Memorandum of Agreement between the two parties, OUM will use Awana facilities to offer various team building and leadership programmes whose activities are built around environment-friendly habits.

Stamford College Malaysia launched the 'Go Green' project on February 2010 to educate schoolchildren on the importance of conservation. Education Ministry, Natural Resources Ministry and jointly organised by Alam Flora, Malaysian Newsprint Industries Sdn Bhd, Rotary Club Pudu and SWM Environment Sdn Bhd. Supported the activity. The 'Go Green' campaign aimed at recycling aluminium cans and paper based items in conjunction with 45 secondary schools in Petaling Jaya, Kuala Lumpur, Seremban and Melaka. Why Waste World (W.W.W) is undertaken by a group of DISTED College students pursuing the Diploma in Hospitality Business Management. The aim of the recycling campaign was to encourage students and staff to go green for the good of the environment and build a sustainable lifestyle for future generations by recycling household waste.

The Green War campaign 2011 was organized by the KDU-USM Bachelor of Communication students to focus on promoting the importance of the mangroves in the ecosystem as well as to illustrate how mangroves can benefit the environment and the community. By that, the campaign intends to eventually nurture positive attitude amongst the public towards preserving mangroves for the betterment of the ecosystem. The Green War

campaign 2011 aims to be the first of many efforts in giving back to nature by way of replanting mangrove trees in Penang.

Yayasan Universiti Multimedia (YUM) launched the 'Race for Green 2011' event to raise funds for the green research project while promoting collegiality among PHEIs in driving green awareness to the future leaders of the country. It is also to ensure translation of the awareness towards the benefit of the nation and the world through future Green Community Engagement and High Impact research at National and International level respectively. The University of Nottingham Malaysia Campus (UNMC) organized its go-green programmed called "The Green Week 2011". The campaign is a weeklong environmental campaign in UNMC that takes place mainly in second half of the academic year 2010/11 and aimed to steer the campus into a greener lifestyle and educate them about the importance of going green. The campaign mission was to transform UNMC into an environmentally friendly campus where Green Week is an annual event and where Mother Nature's best interests are kept in mind and reflected in the community's actions and daily practices.

1.2 Research Problems

Quality is an issue that cannot be avoided in education at present and what institutions do to ascertain quality turns out to be most important and effective of all efforts and initiatives (Bunoti, 2010). The declining of the quality in education has caused PHEIs loose its competitiveness (Basheka, Muhenda and Kittobe, 2009). The government's lack of commitment to financial support and funding reform is the main reason PHEIs lack of competitiveness in quality (Levy, 2010).

Green initiatives may help organizations to improve their competitiveness (Trung & Kumar, 2006). According to York (2008), the use of an ethical framework to integrate environmental ethics into business decisions would create a competitive advantage through. Competitive advantage in quality is positively correlated to green initiatives (Chen, Lai & Wen, 2006). Malaysia showed positive attitudes towards environmental and project sustainability via the initiatives undertaken by the government and private sectors. Malaysian PHEIs will not be exceptions. However, creating a sustainable campus in Malaysia is still at infancy stage (Nazirah Zainul Abidin, 2009). In fact, a numbers of barriers weaken the campus sustainability initiatives. For example, low priority of environmental issues on the campus, and lack of coordination between and among advocates and key constituencies (Sohif Mat , 2009) are identified as barriers.

However, there is limited study done mainly on the influence factors of competitiveness in quality among private higher education institutions (PHEIs) in Malaysia. Most of the literature reviews are conducted in overseas institutions. Hence, this study tends to identify the influence factors of competitiveness in quality among PHEIs in Malaysia and mediating effect of green practices between influence factors and competitiveness in quality.

1.3 Research Questions

To address the important of higher education institutions as a role model for sustainable development, this study would examine the factors that influence PHEIs in Malaysia to become competitive in quality. Specifically, the following questions will be explored:

- a) What are the main influence factors for PHEIs in Malaysia to become competitiveness in quality?
- b) What are the influence factors for PHEIs in Malaysia to initiate green practices?
- c) Does green initiatives adopted by PHEIs in Malaysia influence the institution's competitiveness in quality?
- d) Does green initiatives mediate the relationship between influence factors and the competitiveness in quality?

1.4 Research Objectives

The objective of the study is to

- (a) Examine the influence factors that motivate Malaysia PHEIs to be competitiveness in quality.
- (b) Examine the influence factors that motivate Malaysia PHEIs to adopt green initiative.
- (c) Examine whether the green initiatives have an impact on institution's competitiveness in quality.
- (d) Examine whether the green initiatives mediates the relationship between the influence factors and the competitiveness in quality.

1.5 Significance of Study

The influence factors of competitiveness in quality among PHEIs in Malaysia is explored and measured. There are many internal and external factors that could lead PHEIs to become competitive advantage and this study expects to acquire a clearer understanding on the determinants as dominant. Moreover, with the additional of green initiative implementation could be tested to mediate the relationship between influence factors and competitiveness in quality.

This study expects to enhance the knowledge of decision makers of private education institutions in the following ways:

a) The study discloses the concepts and influence factors of PHEIs to be competitiveness in quality. The understanding is important because of the high global environmental concerns and in addition to their role in enhancing the importance of sustainability.

b) The study discloses the concepts and influence factors of the green initiatives in PHEIs. Thus it can advance decision maker's understanding of the importance and value of green initiatives.

c) The study may help decision makers from PHEIs in setting up appropriate policies and strategies for improving environmental performance of its operation.

1.6 Definition of Variables

The following terms and definitions are presented in order to ensure uniformity and understanding of these words used throughout the study.

1.6.1 Green Initiatives

Actions that being carried out to reduce or minimize the environmental impact (Molla, 2008).

1.6.2 Private Higher Education Institutions (PHEIs)

An education institution of higher learning, which is not controlled and managed by a government (Alam, 2009).

1.6.3 Government

Government is the administrators, legislators and arbitrators in the administrative bureaucracy who control a state at a given time, and to the system of government by which they are organized (Su, 2010).

1.6.4 Top Management

Top management refers to the owner or decision maker who is responsible for the operation of the entire organization (Moore, Konrad, & Hunt, 2010).

1.6.5 Stakeholder

Stakeholder refers to a person, group, or organization that has direct or indirect stake in an organization because it can affect or be affected by the organization's actions, objectives, and policies (Freeman, 1984).

1.6.6 Faculty

Faculty is division within an institute of higher learning, which provide a number of related subject areas for study (Green, 2005).

1.6.7 Regulation

Regulation a set of requirements that the government imposes on private firms and individuals to achieve government's purposes (Darnall, 2009).

1.6.8 Competitiveness

Competitiveness refers to an advantage that a firm has over its competitors, allowing it to generate greater sales or margins and/or retain more students than its competition (McGinnis and Vallopra, 1999).

1.8 Organization of the Thesis

This dissertation consists of five chapters. The first chapter provides the background of the study, followed by grounds for concern, importance of the problem, implications of the research, purpose of the research, research questions and finally definitions of key variables. The second chapter discusses the literature review for the study, which includes competitiveness in quality, top management support, government support, stakeholder pressure, faculty support, green initiatives and theory. Based on the literature review, the theoretical framework and hypotheses are developed. Chapter three covers the research methodology used for this research. Chapter four discusses data analysis and then presents the summary of the results. Chapter five is the final chapter, which recapitulates the study and discusses major findings, implications and limitations of the study. It then gives suggestions for future research and the conclusion.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter consists of the literature review of previous research that related to institution competitiveness, green initiatives and the influence factors of firm competitiveness in quality. The aim of this chapter is to provide an understanding of the independent variables (influence factors), mediating variables (green initiatives) and dependent variable (institution competitiveness in quality) used in this study and how they contributed to the study. The literature review leads to the development of the theoretical framework and hypotheses of the study.

2.1 Institution Competitiveness

Competitiveness of a firm is defined as the ability of an organization to create a defensible position over its competitors (McGinnis and Vallopra, 1999). It is an outcome of a strategy that generates increased value for a firm, relative to its competition, and sustainability is present if the increased value remains when competitors stop trying to imitate the advantage (Barney, 1991). Competitiveness is the capabilities that an organization has to differentiate itself from its competitors and it is an outcome of critical management decisions to attract customers (Tracey, Vonderembse & Lim, 1999). Firms long term goals are improving or defending their competitive position over competitors (Barney, 2002, p. 7).

Quality has become a key competitive element in the global marketplace. Quality is related to the fact that the product being offered by a firm is of a higher physical quality than the competitor's product, or from providing excellent customer service (Ehmke, 2007). Firms that produce superior quality products are creating reputational advantage. Having a

competitive advantage suggests that an organization has the capability to produce higher quality when compared to its competitor (Mentzer, Min & Zacharia, 2000). Organizations competing on quality pursue an operational strategy that controls quality of the product or service and seeks continuous improvement (Agus & Hassan, 2011).

Quality can be conceptualized in multiple dimensions (Nair & Boulton, 2006). According to Garvin (1987), there are eight dimensions of quality namely performance quality, product features, conformance quality, reliability, serviceability, durability, aesthetics and perceived quality. With multi-dimensional demand and challenges of globalization Organizations are forced to re-engineer their operations and systems to be more customer oriented to improve the service quality to remain competitive due to the multi-dimensional demand and challenges of globalization (Yasin et al., 2004). The definitions of quality in education are customer focused, i.e. meeting or exceeding customer's expectations of education (Parasuraman et al., 1985), with an emphasis on identification of relevant bases and measurement criteria to use in evaluating quality (Sahney et al., 2010).

The competitive dimensions of quality such as product and service quality contributes to the overall firm performance and ultimately to competitive advantage (Curkovic, 2000). Product competitive advantage is a product's design quality, encompassing the superiority or uniqueness of its features as well as its fitness for use. Products with greater competitive advantage offer more innovative features with greater quality to customers (Swink & Song, 2007). Total Quality Management (TQM) initiatives have been implemented in many firms as a strategy of high quality that leads to a sustainable competitive advantage (Agus et al., 2011). The market-based strategies such as market orientation could promote the delivering of superior customer value through quality products or services with the aim to achieve competitive advantage (Zhou, Zhou & Su, 2008).

Orientation towards PHEIs competitiveness in quality has started gaining the attention of the policy makers, educational planners, and administrators as also the various stakeholders of the educational system (Sahney et al., 2010). Attempts by educational institutions to become more efficient, effective and customer-centric are underway to improve the quality of their services, achieve competitive advantage and move on a path of academic excellence.

2.2 Influence Factors

2.2.1 Top Management Support

Top management is a set of individuals at the top level of the organization responsible for the strategic and organizational decisions that affect the direction, operations, and performance of the company as a whole (Moore, Konrad, & Hunt, 2010). Top management team includes the Chief Executive Officer (CEO), Chief Operating Officer (COO) and other executive levels, such as Executive Vice President and Senior Executive Vice President.

Boyd (2008) documented that organizational members become more accepting of change when they are aware how the change will achieve firm goals and how it will affect the working environment. The actions of top managements flow downward are the key processes that help to create lasting organizational change (Cole et al., 2006). The values and priorities of the organization are established at the top and communicated down the hierarchy (Guffey & Nienhaus, 2002) and employees are more likely to engage in actions that are valued by top management (Bartol et al., 2003). Moore et al., (2008) argue that top management support for change must be combined with a clear vision for effectiveness at enhancing diversity and inclusiveness.

Senior or top management's support from individual institutions is essential for a specific project to be successful (Mooney, Mahoney & Wixom, 2008; Boyd, 2008). Project influence required top management support (Young & Jordan, 2008). Top management is more likely to support projects that have salvage value- that are expected to yield positive outcomes even if they do not ultimately achieve the project objectives. According Mooney et al. (2008), top management's support on particular project depends on a number of factors such as project characteristics, stage of the projects, the nature of project team members, organizational factors, industry factors, and top management team attributes.

2.2.2 Stakeholder Pressure

Responding to stakeholder pressure requires organizational learning capabilities, especially when there are conflicting pressures derived from a variety of stakeholders (Roome & Wijen, 2006).

Stakeholders include both internal and external stakeholders. External stakeholders such as customers, government regulators, shareholders, and society in general represented by non-governmental organizations who do not have control of critical organizational resources (Sharma & Henriques, 2005). Conversely, internal stakeholders include owners, customers, employees, and suppliers who have the direct control of critical organization resources. Firms need to understand the importance of responding to pressure from different stakeholders (Freeman, 1984) to help them improve their competitive posture. Firms also require managing many conflicting interests among stakeholders. As posited by stakeholder theory, stakeholder pressures result in significant motivation for organizations to adopt various environmental practices (Buysse & Verbeke, 2003). Stakeholder theory explained that ability to manage relationships among stakeholders is the firm's influence factor (Marshall, Akoorie, Hamann & Sinha, 2010). Firms, which faced more pressure from stakeholders, have greater incentives to perform environmentally and economically in order to persuade stakeholders that their investments and the firms operations are not conveying any environmental risk (Al-Tuwaijri et al., 2004).

2.2.3 Government Support

For quite some time, the government has engaged in the promotion of green industries. For instance, government provides the regulatory framework to facilitate the growth of certain green industries and sponsored growth directly by providing various types of incentives. Government intervention to promote green initiatives is often legitimized by

public good provision in terms of better environmental quality (Daughbjerg & Svendsen, 2011).

Cost reductions can be achieved by government policies, which lowered capital cost, and increased investment in technology, advanced learning and experience, and produced economic of scale (Sawin, 2004). Tax incentive becomes one of the major supports from government. For example, the U.S. government provided hybrid vehicle buyers with income tax incentives to offset the significant high cost of hybrid vehicles (Beresteanu & Li, 2011).

Synergistic effect can be created by an effective implementation of continuing government support. The increase in government's support will promote the industrial sectors' own investment and effort on their innovation activities. Both government's direct funding as an incentive stimulating policy instrument and industrial sectors' own funding in science and technology activities that have positive effects on the industrial R&D investment and the stability of the policy further enhances the positive effect (Zhu, Xu & Lundin, 2006). Project funding from government support affects firms' innovation by stimulating internal R&D and domestic upstream and downstream collaborations. A study by Kang and Park (2012) implies the importance of governmental funding in R&D and networking with foreign universities and research institutions as well as downstream partners.

A study by Rasmussen (2008) showed that government support in term of resources, professional expertise development and cooperation between commercializing firms are vital to facilitate the commercialization of university research. There are many support activities provided by government with the intention to enhance the development of SMEs in Malaysia. These recognized support activities are financial and credit assistance, technical and training assistance, extension and advisory services, marketing and market research and infrastructure supports (Abdullah, 1999).

2.2.4 Faculty Support

Faculty plays an important role in campus long-term program sustainability (Betts, 2009). Thompson and Green (2005) suggested that it is of equal importance to have a small contingent of faculty and staff dedicated to operationalized sustainability practices on campuses. The faculty has valuable expertise to contribute to campus programs and organizers behind the sustainability movement should enlist this institutional asset. By offering funding, they found that faculty and administrators were more willing to listen to sustainability proposals and often maintained interest for the long term (Edmonds, 2011). The campus faculty uses several methods of persuasion to encourage campus transformation (Cockerill & Carp, 2009).

2.2.5 Regulation Compliance

Regulation compliance means conforming to a rule, such as a policy, specification, standard or law. Regulatory compliance describes the goal that corporations or public agencies aspire to in their efforts to ensure that personnel are aware of and take steps to comply with the relevant laws and regulations.

Firms spend millions of dollars annually to comply with environmental regulations (Portney and Stavins 2000). Darnall (2009) argued that environmental regulatory pressures constrain organizations' financial opportunities and maintain the environmental regulations can spur product and technology innovations and encourage greater operational efficiencies.

The governments should opt to gradually raise regulation standards so that rational firms will gradually improve its environmental practices (Chen & Sheu, 2009).

2.3 Influence Factors and Competitiveness in Quality

2.3.1 Top Management Support and Competitiveness in Quality

Like any other sector, the PHEIs are under pressure to improve competitiveness and management needs to cope with fast social, economic and political transitions that place demands on the system and its employees (Bui et al., 2010). The improvement of PHEIs quality depends in the organizations ability to provide an overall climate and culture change through its various decision-making systems, operating systems, and human resource practices (Mosadeghard, 2006). A transformation from hierarchical top-down structures to top management commitment is a prerequisite for PHEIs to implement quality systems in educational fields (Mizikaci, 2003).

Senior management embraced total quality management (TQM) as a strategy for quality improvement to achieve competitive advantage (Venkatraman et al., 2007). According to Oliver (2009), top management in certain organization is committed to the quality improvement program. Top management showed its commitment to the quality management system development and continuously improved the effectiveness in PHEIs. The top management responsible for developing and improving the quality system, focused on customer needs and formulating quality policy etc (Basir, 2012).

2.3.2 Government Support and Competitiveness in Quality

The government recognized that higher education is a major building block for national development and taking continuous steps to enhance competitiveness in the sector. This comes in line with the recent growth of demands for PHEIs to match their quantitative developments with qualitative improvement to better meet the challenges of today's globalize knowledge-based world (Kim, 2010). The government's support for quality education services has pushed the PHEIs to further upgrade their education systems (Rasmussen, 2008).

Government support such as laid out innovative schemes to ease or abolish regulations so that PHEIs may secure expanded autonomy in administration. Tailored government subsidy plans for students and institutions to boost their competence and equip them with the capacity to effectively address new changes are taken place (Alam, 2009). Government implemented income tax exemptions and other official levies to encourage PHEIs improved educational quality and infrastructural development for a pleasant academic environment (Maassen, 2008).

Quality assurance at the governmental level is necessary as a driving force to reform PHEIs. It can be a way to rank PHEIs at the national level and can have an impact on the competition between PHEIs. (Basir, 2012). The government made every effort to ensure that education has become an export industry. For instance, the Malaysian government has allocated 20.6% from the overall expenses of the 10th Malaysia Plan on education sector. Government support via regular supervision and monitoring is necessary to provide security to maintain proper academic environment by attracting quality.

2.3.3 Stakeholder Pressure and Competitiveness in Quality

There is increasing stakeholder pressure for demanding better service quality from PHEIs due to the global knowledge economy (Duderstadt, 2008). Nowadays, the PHEIs encounter great competition from educational rivals and are under huge pressure from various institutions stakeholder to become more responsive to customer needs. Orientation towards competitiveness in quality delivered in higher education has started gaining the attention from various internal and external stakeholders within the educational system (Sahney et al., 2010).

The educational stakeholders initiated the demand for better service quality in PHEIs. Influential stakeholders of the PHEIs also have a crucial responsibility of holding open and

constructive discussions with institutions for better understanding on the development of education quality and offer proactive suggestions and support towards achieving the goals for gaining competitive advantage (Abukari & Corner, 2010).

2.3.4 Faculty and Competitiveness in Quality

Faculty is considered as key initiators, supporters and advisors in achieving competitive advantage among PHEIs (Su et al., 2010). Faculty viewed the importance of quality in education as a path towards institutional competitiveness (Trivellas et al., 2009). Some faculty provided scholarship for staffs to further studies in order to create quality manpower that can enhance their competitiveness (Venkatraman, 2007). Faculty academics and related professionals involved in guiding sustainability in PHEIs and transmit practices via collaboration with teachers and administrators among PHEIs (Su et al., 2010).

Faculty management is responsible for attracting student-customers and sustaining recruitment by supporting student development. Faculty need to prioritize student needs and concern in order to gain a competitive edge in the highly competitive global environment (Brown & Oplatka, 2010). According to Ashraf et al., (2009), faculty initiatives are perceived by customers (students) as associated to the quality in education that can enhance the PHEIs competitiveness in quality.