

## **A MODEL LINKING INSTITUTIONAL FACTORS AND GREEN INITIATIVES: A STUDY AMONG THE PRIVATE HIGHER EDUCATION INSTITUTIONS**

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**Abstract:** The rise of awareness in environmental management has urged the industries to adopt green practices in their organizations. Subsequently, many organizations, including higher educational institutions had included green initiatives as a vital part of the strategic planning in organizations. However, creating a sustainable campus with green initiative in Malaysia is still at infancy stage. In fact, a number of barriers weaken the green initiative among the higher educational institutions. Therefore, the objective of this study was to examine the effect of institutional factors on the green initiatives among private higher educational institutions (PHEIs). Data was collected via a survey from 138 PHEIs in Malaysia. The Partial Least Square (PLS) analysis was employed to analyse the data collected. The results revealed that three institutional factors, namely government support, faculty involvement, and stakeholder pressure influence the PHEIs' green initiatives. Government support in term of resources, incentive and facilitating the cooperation between commercializing firms has fully support the PHEIs' to implement green initiatives. The faculty involvement in participating the green activities and environmental management program will certainly influence the decision of PHEI to implement green initiatives. On the other hand, stakeholder who exerted pressure has also urged PHEI to implement green initiative. This study concludes that government support, faculty involvement, and stakeholder pressure play a vital role to motivate PHEI to adopt and implement green initiatives in its facility.

Keywords: Government support, faculty involvement, stakeholder pressure, educational institutions.

### **Introduction**

Today, international organizations recognize education is vital to the pursuit of sustainability. 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. The force of change is acting upon the higher education institutions (HEIs) due to environmental issues. In this regards, 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). HEIs are recognized as leaders, innovators, and problem-solvers. Therefore, it 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).

In Malaysia, there are increasing pressures on HEIs to be competitive in the global economy. In particular, the development of the private higher education institutions (PHEIs) looks encouraging because of the increasing number of institutions in recent years. PHEIs play an important role in contributing to the Malaysian economy via foreign exchange earnings. Shriberg (2002) suggested that PHEIs have the responsibility to become sustainable leaders, 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. In fact, PHEIs can teach and demonstrate the principles of stewardship and awareness for greening their campuses.

The common sustainability themes impacting PHEIs 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, industry, and public outreach (Wright, 2002). Establishing sustainable themes might help PHEIs focus their efforts on specific issues which include, but 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. Once sustainability theme 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).

Although Malaysia shows the positive attitudes towards environmental and project sustainability via the green initiatives undertaken by the government and private sectors, creating a sustainable campus in Malaysia is still at infancy stage. In fact, a number 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 (Mat, *et al.*, 2009) are identified as barriers. There is also a limited studies on the factors that influence the green initiatives among PHEIs in Malaysia. Most of the researches were conducted in overseas institutions. Hence, this study tends to explore the effect of the influence factors on the green initiatives in Malaysia PHEIs.

### ***Theoretical Background***

Institutional theory was adopted as an underlying theory in this study. According to Oliver (1997), Institutional theory makes assumption that managers commonly make economically non-rational choices bounded by

social judgment, historical limitations and the inertial force of habit. In this study, Institutional theory is used to access how institutional factors influence the PHEIs' green initiatives. This theory considers both internal and external stakeholders impose coercive pressure on firms in green initiatives and practices (Delmas & Toffel, 2004). We argue that because of the coercive forces - primarily in the form of government support, faculty involvement and stakeholder pressure - have been the main impetus of green initiatives, PHEIs throughout its industry have implemented the similar practices.

### ***Green Initiatives***

Over the last two decades, Malaysia economy has gone through a rapid development. The downside of this development cause a serious environmental issues which are now of public concerns (Hsu, Tan, Mohamad Zailaini, & Jayaraman, 2013). Recognizing that businesses are the principal source of national income and economic growth, the Malaysian government has instituted several green incentives to encourage business and industry to proactively implement green initiatives within their facility. Green initiatives refers to actions that being carried out to reduce or minimize the environmental impact (Molla, 2008). Usually, green initiatives appear very costly and offer uncertain return to the firms (Linton, Klassen & Jayaraman, 2007). Nowadays, the higher education sector acknowledged that its activities can significantly impact the environment and begun to initiate the activities to minimize the adverse impacts on the ecosystem. Among the green initiatives taken by PHEIs include implement a comprehensive approach for institutionalizing a greening campus and present a whole-system approach that demands attention to planning for the growth and development of the campus (Koester *et al.*, 2006). The campus is moving to accommodate green building practices by including recycled content materials, high-efficiency lighting, low-flow plumbing fixtures, and protection of existing ornamental trees and landscape features. This may involve the incorporation of significant green building technology by considering land-use, building

design and construction strategies that will reduce negative impact to environment (Owens, K. A., & Hitchcock, H. 2006). Some campus are planning bicycle paths that will integrate with existing and future bikeways to demonstrate a substantial commitment to alternative means of transportation in order to reduce the fossil fuel dependency. Besides, the PHEIs can adopt bulk purchasing practices to reduce the solid waste stream and maintain an active recycling program in cooperation with the campus waste hauler. PHEIs, undoubtedly substantial water users, can serve a leading role in the promotion of water conservation and sustainable growth. Therefore, many PHEIs are rethinking their resource utilization while improving their environmental performance.

### ***Institutional Factors***

#### ***Government Support***

Based on Bealey (1999), government refers to 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. In recent years, 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 (Daugbjerg & Svendsen, 2011).

#### ***Stakeholder Pressure***

According to Freeman (1984), stakeholder denotes 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. Generally, stakeholders can be divided into internal and external stakeholders. External stakeholders refer to government regulators, shareholders, and society who do not have control on the organizational resources (Sharma & Henriques, 2005). On the contrary, internal stakeholders refer to owners,

customers, employees, and suppliers who have the direct control on the organization resources. As posited by stakeholder theory, stakeholder pressures result in significant motivation for organizations to adopt various environmental and green practices (Buysse & Verbeke, 2003). Organization which faced more pressure from stakeholders, have greater incentives to perform environmentally and economically in order to persuade the stakeholders to continuously invest to the company (Al-Tuwaijri *et al.*, 2004). Due to the great competition from educational rivals, PHEIs are under huge pressure from various stakeholders to become more responsive to its stakeholder's requirements (Duderstadt, 2008).

#### ***Faculty Involvement***

According to Green *et al.* (2009), faculty refers to a division within an institute of higher learning, which provide a number of related subject areas for study. Faculty of the institutions, such as universities can serve as important vehicles in educating individual on the environmental issues. These faculties can also implement various practical greening activities that enhance the concept of sustainability (Figueredo & Tsarenko, 2013). Hence, faculty plays an important role in campus long-term program sustainability (Betts, 2009). The faculty has valuable expertise to contribute to campus programs, and organizers behind the sustainability movement should enlist this institutional asset. By offering funding, faculty and administrators are more willing to listen to sustainability proposals and often maintained interest for the long term. Therefore, faculty involvement is important to operationalize sustainability practices within the campuses (Thompson & Green, 2005).

### ***The Relationship between Institutional Factors and Green Initiatives***

#### ***Government Support and Green Initiatives***

Government support is one of the important drivers of corporate environmentalism. Firms that commit to environmental improvements are likely to improve their relations with governmental entities and stay ahead of

environmental regulations. A survey on HEIs at U.S which have signed the Talloires Declaration on Sustainability found that governmental forces is one of the determinants in driving campus environmental initiatives (Shiberg, 2002). Government pressure is increasing for HEIs to embark in environmental initiatives globally. For instance, universities are required to provide an Environmental Report to the local authority in Netherlands, and provide a condensed version of their report to the general public regarding their environmental performance information and data (Walton, 2000). Taiwan's institutions have been blessed over the past decade with resources and incentives from various government agencies and ministries, to support them in becoming more sustainable institutions, in curriculum development and infrastructural reformation. In Malaysia, government has built up the environmental awareness in the Ninth Malaysia Plan 2006-2010, where Malaysian government has placed further emphasis on the environmental preventive measures (Hsu *et al.*, 2013). These measures aim to mitigate the negative environmental effects at source, which includes supplier evaluation and environmental certification of suppliers (Hsu *et al.*, 2013). It is clear that certain government-sponsored funding schemes to PHEIs will be actively promoting sustainability research and encouraging academic faculty to work on the connections between research and technology, and their practical and educational applications. Therefore, our first hypothesis is postulated as,

H1: Government support is positively influenced PHEIs' green initiative.

#### *Stakeholder Pressure and Green Initiatives*

Like other businesses and corporations, PHEIs deal with stakeholders (students, alumni, administrators, faculty, etc.) with varying levels of prominence (saliency), multiple decentralized levels of management, and a product (education) that is consumed by the public. In fact, PHEIs share many issues that the business world faces in relation to environmental sustainability (Eimers, 2008). Nowadays, the increasing awareness of the environmental issues, students

are placing more attention on the campus sustainability and support for the construction of green buildings (Thompson & Green, 2005). The optimum method for sustainable development to occur in campus involves and includes all stakeholders (Shepard and Johnson, 2010). For instance, at University of Waterloo, students have been vocal in initiating green program and actively participate in WATgreen – the Advisory Committee, which responsible for the campus greening program (Richardson & Lynes, 2007). Campus alumni also influenced campus culture to adopt green initiatives (Hasegawa, 2008). Due to alumni pressure, PHEIs has slowly shifted toward more sustainable practices by discarding out-dated practices and adopt an environmentally sensitive strategic direction (Hoffmann, 2007). Many PHEIs involve in environmental practices with the aim to attract private donors who are concerned about sustainability (Merkel & Litten, 2007). Donors increasingly emphasize on individual departments' commitment to sustainability, and ensuring that even small projects emphasize on green building criteria could have quantifiable impacts on the ability of the units to campaign for capital. Based on the above discussion, our second hypothesis is formulated as,

H2: Stakeholder pressure is positively influenced PHEIs' green initiative.

#### *Faculty Involvement and Green Initiatives*

Faculty is one of the most important stakeholders that play a vital role in promoting sustainable practices. Thompson & Green (2005) stated that institutionalizing sustainability at institutions is important with the faculty commitment and involvement. Faculty has an important role in creating opportunities for students and supporting student-led green initiatives. These more permanent members of the campus community can provide an essential function in institutionalizing the green initiative. Faculty also play a critical role in creating a sustainable future by incorporating environmentally sustainable design curriculum in the campuses (Cortese, 2003). A study by Stafford (2008) was proven that faculty involvement drive the

institutions to adopt sustainable practices and green initiatives. Hence, our third hypothesis is proposed as,

H3: Faculty involvement is positively influenced PHEIs' green initiative.

**Research Framework**

The study investigates the effect of the 3 institutional factors, namely government support, stakeholder pressure, and faculty involvement on the PHEIs' green initiatives. The research framework of the study is shown in Figure 1.

**Method**

**Samples and Data Collection**

The unit of analysis in this study is the private higher education institutions (PHEIs) in Malaysia. The institutions list was obtained from the Ministry of Higher Education (MOE) web portal. A total total of 452 PHEIs in Malaysia which 28 units are university level, 21 units are college university level, and 403 units are college level. If follows the rule of thumbs set by Hair *et al.* (2010), the minimum sample size is ten-to-one, means a minimum of 40 sample size required in this study. Nevertheless, given the small sampling size if follow the rule of thumbs, and also considering the possibility of obtaining low response rate from mailed survey (Sekaran, 2003), the census method for collecting data was used in this study. The survey packets were mailed to the dean of 452 PHEIs, and the respondent were given three weeks to response to the survey. We collected a total of 138 questionnaires within a period of 2

months. All these completed surveys were found to be useable and subsequently analyzed.

**Measures and Analysis**

We adapted the measurement items for our independent variables (government support, stakeholder pressure, and faculty involvement) from various sources. Government support consists of 4 items adapted from Lin (2008); stakeholder pressure contains of 6 items adapted from Shriberg (2002); and faculty support comprises of 3 items self-constructed. Table 1 listed all the measurement items used in this study. Meanwhile, green initiatives were measured using 5 items procured from Shriberg (2002). Respondents responded to the items using a 5-point Likert-type scale with "1" = "strongly disagree" to "5" = "strongly agree". Our three hypotheses were tested with Partial Least Squares (PLS) software developed by Ringle *et al.* (2005). The model can be tested in two steps, namely the measurement model, and the structural model (Henseler, *et al.*, 2009) by using Smart PLS version 2.0 software. A variance based Structural Equation Modeling (SEM) was used to assess the research framework developed in this study. This includes evaluating the measurement model and structural model (Chin, 1998). The measurement model tests the relations between the observed variables and latent variables using algorithm approach. Conversely, the structural model tests the relationships between latent variables using the bootstrapping approach. The measurement model is assessed on its reliability (item reliability and internal consistency) and validity (convergent validity and discriminant

Figure 1: Research framework of the study

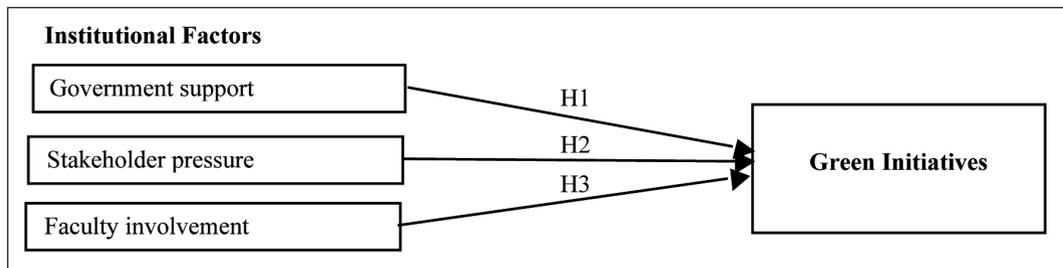


Table 1: List of measurement items

Variables	Measurement Items
Government Support	Government provides incentives for developing green initiatives. Government encourages institutional to propose green initiative projects. Government helps training manpower with green initiative skills. Government sets the environmental regulations for the educational industry.
Stakeholder Pressure	Student always pressures the institution to implement green initiatives. Faculty always pressures the institution to implement green initiatives. Alumni always pressure the institution to implement green initiatives. Donor always pressures the institution to implement green initiatives. Government always pressures the institution to implement green initiatives. Activist always pressures the institution to implement green initiatives.
Faculty Involvement	Faculty often allocates budget for green initiatives implementation. Faculty often proposes green initiatives projects to the institution. Faculty realizes its responsibility in maintaining environmental sustainability.
Green Initiatives	My institution maximizes the recycling program (eg. aluminum can, paper, plastic etc.). My institution maximizes energy conservation activities (eg. efficient light bulb, solar panel, etc.). My institution maximizes water conservation activities (eg. dual flush toilet, reuse rain water for gardening, etc.). My institution maximizes greenhouse gas emission through sustainable transportation (eg. cycling, car pool, etc.). My institution implement green purchasing practices (eg environmental friendly stationeries, cleaning chemicals etc.).

validity), and the structural model is assessed based on the significance of the path coefficients and R<sup>2</sup> measures. Smart PLS is justified to be employed in this study and the main concern of this study is to predict the relationships between the latent constructs, and to maximize the explained variance in endogenous variables (Vinzi, Trinchera, and Amato, 2010).

**Development of Questionnaires**

There are 3 sections in the questionnaires. Section A consists of demography of the respondent. The remaining sections of B and C represent measurement of independent variables (institutional factors) and dependent variable

(green initiatives) respectively. Table 1 lists the measurement items in section B and C.

**Results**

**Participating Institutions Profile**

Data characteristics such as type of institutions, level of the institutions, years of operations, size of institutions and number of students used descriptive statistics method (Sekaran, 2003). A total of 138 PHEIs participated in the survey. Majority of the PHEIs are local based (83.3%), follow by joint venture between local and foreign (8.7%), and fully foreign owned (8.0%). Among the participating PHEIs, 55.8%

Table 2: Measurement model

Construct	Item	Loading	AVE	CR
Government Support	GOV1	0.717	0.639	0.841
	GOV3	0.848		
	GOV4	0.827		
Stakeholder Pressure	ACTP	0.842	0.631	0.836
	DONP	0.719		
	GOVP	0.816		
Faculty Involvement	FA1	0.823	0.689	0.869
	FA2	0.824		
	FA3	0.842		
Green Initiatives	GI1	0.797	0.592	0.813
	GI2	0.732		
	GI5	0.778		

are college level, 30.4% are university level, and 13.8% are college university level. In addition, the descriptive statistics of the participating PHEIs were also compiled. The average years of operation, number of employees, and number of students for the sample is 17.5 years (SD = 11.0), 562 people (SD = 825), and 4408 people (SD = 75596) respectively.

**Measurement Model Results**

We first tested the convergent validity to examine if a particular items measures a latent variable which it is supposed to measure (Urbach & Ahlemann, 2010). The factor loadings, composite reliability (CR), and average variance extracted (AVE) were used to assess convergence validity. When running PLS Algorithm, most of the items loadings were above the threshold value of 0.70 as proposed by Chin’s (1998), except two items of green initiatives (GI3 and GI4) with a loading of 0.623 and 0.627 respectively; one item of government support (GOV2) with a loading of 0.691; and one item of stakeholder pressure (ALUP) with a loading of 0.664. Thus, the loading for these four items were deleted. We rerun the PLS Algorithm again after deleted these four items. As shown in Table 2, all items loadings were above 0.70. Next, we checked the

AVE, which measures the variance captured by the indicators relative to measurement error, and it should be greater than 0.50, means on average, the construct explains more than half of the variance of its indicators. In this study, the AVE ranged from 0.592 and 0.689, which meeting the minimum cut off values of 0.50. In term of CR, the minimum value for internal consistency for the latent variables is 0.70 (Fornell & Larcker,1981). In this study, the composite reliability values ranged from 0.813 to 0.869. Thus, it can be concluded that our measurement model is reliable and demonstrates adequate convergent validity.

Next, we text the measurement model on its discriminant validity. Discriminant validity is to examine the extent to which a construct is truly distinct from other constructs by empirical standards (Hair et al., 2013). Hair et al. (2013) proposed two types of measures of discriminant validity. The first type for assessing discriminant validity is by examining the cross loadings of the indicators. The second type is by comparing the square root of the AVE values with the latent variable correlations. We used these two types of measures to assess the discriminant validity for our study. Table 3 presents the cross loadings of the indicators. The results showed that all

Table 3: Cross loadings

	<b>Government Support</b>	<b>Faculty Involvement</b>	<b>Stakeholder Pressure</b>	<b>Green Initiatives</b>
<b>GOV1</b>	<b>0.717</b>	0.259	0.325	0.367
<b>GOV3</b>	<b>0.848</b>	0.447	0.404	0.507
<b>GOV4</b>	<b>0.827</b>	0.445	0.429	0.449
<b>FA1</b>	0.443	<b>0.823</b>	0.399	0.414
<b>FA2</b>	0.411	<b>0.824</b>	0.313	0.418
<b>FA3</b>	0.370	<b>0.842</b>	0.439	0.454
<b>ACTP</b>	0.422	0.426	<b>0.842</b>	0.498
<b>DONP</b>	0.327	0.268	<b>0.719</b>	0.300
<b>GOVP</b>	0.398	0.384	<b>0.816</b>	0.403
<b>GI1</b>	0.531	0.371	0.387	<b>0.797</b>
<b>GI2</b>	0.323	0.454	0.385	<b>0.732</b>
<b>GI5</b>	0.420	0.377	0.428	<b>0.778</b>

Note: FA denotes the items for faculty support; GOV denotes the items for government support; ACTP, DONP, and GOVP denote the items for stakeholder pressure; and GI denotes the items for green initiatives.

Table 4: Discriminant validity

	<b>Government Support</b>	<b>Faculty Involvement</b>	<b>Stakeholder Pressure</b>	<b>Green Initiatives</b>
<b>Government Support</b>	<b>0.799</b>			
<b>Faculty Involvement</b>	0.490	<b>0.830</b>		
<b>Stakeholder Pressure</b>	0.486	0.464	<b>0.794</b>	
<b>Green Initiatives</b>	0.557	0.517	0.519	<b>0.769</b>

Note: Diagonals value represents the square root of AVE while the off-diagonals value represents the correlations.

items indicated sufficient convergent validity and discriminant validity as the loading of each item is greater than all of its cross-loadings (Hair *et al.*, 2013). As presented in Table 4, the square root of each construct’s AVE is greater than its highest correlation with any other construct. In sum, the measurement model demonstrated adequate discriminant validity.

The results of the direct effect hypothesized in this study was presented in Figure 1. The R<sup>2</sup> value of green initiatives was 0.433 suggesting that 43.3% of the variance in green initiatives can be explained by government support, stakeholder pressure, and faculty involvement.

**Structural Model Results**

We proceeded with the path analysis to test our hypotheses. We run the bootstrapping procedure with 500 re-samples to test the significance of the regression coefficient. Table 5 presented the hypothesis testing results. The results indicated that government support ( $\beta = 0.314, p < 0.01$ ), stakeholder pressure ( $\beta = 0.252, p < 0.01$ ), and faculty involvement ( $\beta = 0.246, p < 0.01$ ) were positively related to green initiatives. Thus, our three hypotheses, H1, H2, and H3 were supported.

Besides, we also examine the predictive capability for the model via the Q<sup>2</sup> statistic. Q<sup>2</sup> value greater than zero means that the model has

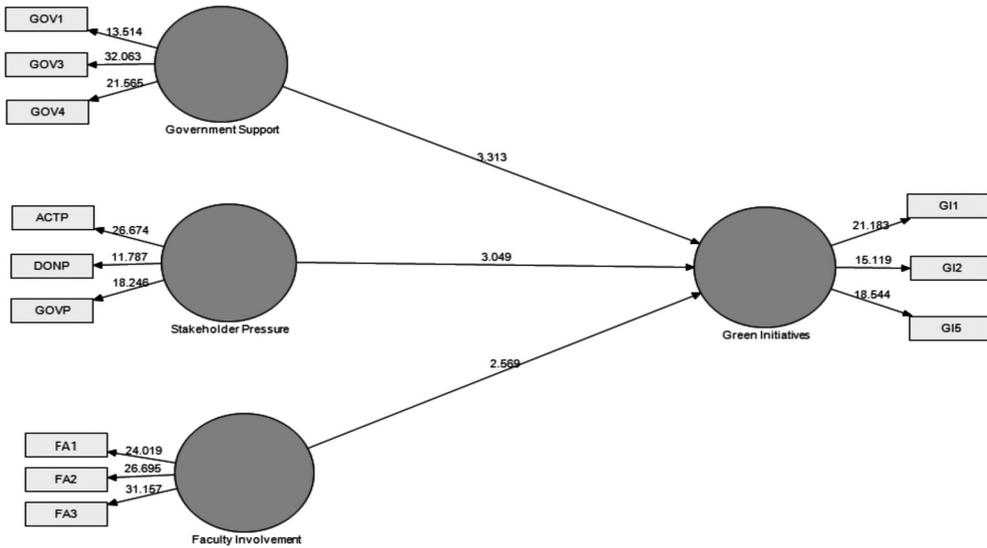


Figure 2: Measurement model

Table 5: Hypothesis testing

Hypothesis	Relationship	Beta	Standard Error	t-value	Decision
H1	Government Support -> Green Initiatives	0.314	0.095	3.313**	Supported
H2	Stakeholder Pressure -> Green Initiatives	0.252	0.083	3.049**	Supported
H3	Faculty Involvement -> Green Initiatives	0.246	0.096	2.569**	Supported

Note: \*\*  $p < 0.01$ , \*  $p < 0.05$

predictive relevance. Conversely,  $Q^2$  value less than zero means that the model lacks predictive relevance (Fornell & Cha, 1994). There are two types of  $Q^2$  statistics estimates, which are cross-validated communality ( $H^2_j$ ) and cross-validated redundancy ( $F^2_j$ ). Both  $H^2_j$  and  $F^2_j$  values should be greater than the threshold of zero (Fornell & Cha, 1994). By performing blindfolding, our results revealed that  $H^2_j = 0.600$  and  $F^2_j = 0.256$ . Thus, it can be concluded that green initiatives was well-explained by government support, stakeholder pressure, and faculty involvement.

**Discussions**

The aim of this study was to examine the effect of three specific institutional factors

(government support, stakeholder pressure, and faculty involvement) on green initiatives. On the whole, the statistical results supported all our hypothesized relationships. Government support is found to have a strong influence on green initiatives. Government support is important in achieving campus green initiatives. There are many support activities provided by the Malaysian government agencies with the intention to enhance the development of higher institutions to remain competitiveness. These support activities are training assistance, financial assistance, advisory services, and infrastructure supports (Abdullah, 1999). Certain government-sponsored funding schemes are actively promoting sustainability research and are encouraging academic faculty to work

on the connections between research and technology, and their practical and educational applications. Our finding is consistent with the previous researches done by Shiberger (2002). Besides, faculty involvement has proven to have an influence on green initiatives implementation. Faculties that have historical background on environmental education and research initiatives usually will progressively expanding the environmental elements in their teaching and research (Clarke & Kouri, 2009). Our result concurs with the previous findings by Thompson and Green, (2005). Stakeholder pressure is also found to have a significant influence on green initiatives. Stakeholder surrounding the PHEIs may exert pressure on institutions to adapt better environmental practices. This is because the operations of the institutions may affect its surrounding communities, for instance solid waste discharged, various gases emitted from vehicles and chemical discharged from laboratories inside the institutions. As a result, this has prompted the communities to pressure institutions to come out with the proper environmental management system and green practices that will minimize the impact on its surroundings (Hoffmann, 2007). Our result is congruent with the previous studies done by Stafford (2008) and Ghosh (2011).

The results of this study offers both theoretical and practical contributions. From the theoretical perspective, this study contributes to growing literature on the influence of institutional factors, and green initiatives. The theoretical relationship from the research framework is empirically supported as the linkage between institutional factors and green initiatives are confirmed. In particular, this study contributes on the importance of government support, faculty involvement and stakeholder pressure in determining the green initiatives. With the significant results proven that all three institutional factors are influencing green initiatives, this study has also expanded the body of knowledge in institutional theory, which was used to construct the framework of this study. Practically, this study helps to enhance the knowledge of decision makers of

private education institutions in the following ways: a) this study discloses the concepts and institutional factors of green initiatives in PHEIs. The understanding is important because of the high global environmental concerns and in addition to their role in enhancing the importance of sustainability; b) this study advances decision maker's understanding of the importance and value of green initiatives; c) this study helps decision makers from PHEIs in setting up appropriate policies and strategies for improving environmental performance of its operation.

There are two main limitations identified in this study. The first limitation relates to the predictors of the green initiatives. Only three institutional factors were examined. Future researchers may include other factors, such as campus facilities (Ashraf & Ibrahim, 2009), and service quality delivery (Hassan *et al.*, 2008). The second limitation deals with the scope of the study limited to PHEIs in Malaysia. Future study should consider to include public HEIs. This would help to get a broad view of the finding.

## Conclusion

The study was mainly to examine the influence of institutional factors on the PHEIs' green initiatives in Malaysia. Particularly, it is within the context of PHEIs in Malaysia. A theoretically derived model was proposed to link the constructs of government support, faculty involvement, and stakeholder pressure to the green initiatives. Structural Equation Modeling (SEM) was then applied to test the model as applied to a sample of 138 PHEIs in Malaysia. The results indicated that government support, stakeholder pressure, and faculty involvement have significant impact on the extent of green initiatives implementation. This finding attests the success of the government support, stakeholder pressure, and faculty involvement in providing unprecedented results on the green initiatives. PHEIs can strive to improve institutions competitive advantage by looking at the institutional factors and enhance

the relationship with stakeholder involved. The result obtained from this study provides guidance for PHEIs on how to increase green initiatives through appropriate methods. Hence, it can be concluded that these three institutional factors are vital to influence the green initiatives of PHEIs in Malaysia.

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