

# The Study of Government-university Relationship in Malaysian Higher Education System

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## Abstract

Recently the Agency Theory is extensively used in the study of government-university relationship in higher education system. The theory expounds the main concept of information asymmetry and goal conflict in the relationship. In this paper these two concepts are used to explain efforts undertaken by the Malaysian Federal Government to improve the quality of higher education and their struggle to reform the funding system in public universities. This move is parallel to the implementation of National Higher Education Strategic Plan Beyond 2020 which was announced in 2007. Interestingly, this study found that public universities in Malaysia are working positively towards materialising the government objectives regardless of the government funding cuts. Indeed, the government initiative to keep track of the universities performances by using the monitoring, controlling and incentives mechanisms have helped reduce the agency problems in the government-university relationship.

**Keywords:** agency theory, strategic planning, funding, higher education

## 1. Introduction

In recent years, the Malaysian Government has introduced some extensive changes in its strategic planning for public universities to stimulate competition in the higher education sector and to ensure that the industry follows the objectives set by government (Ministry of Higher Education, 2007a, 2007b). Under the aegis of the National Higher Education Strategic Plan beyond 2020 and National Higher Education Action Plan 2007-2010, the government has introduced extensive reforms in its funding mechanisms for higher educational institutions. In addition, to facilitate successful execution of the strategic plan, the government has established 23 Critical Agenda Projects or CAPs. Here, each of CAP has its own objectives, indicators and targets that need to be achieved (Embi, 2011). This CAP is divided into five pillars: (1) governance: (2) leadership: (3) academia: (4) Teaching and Learning (T&L): and (5) Research and Development (R&D) (Ministry of Higher Education, 2007a).

Meanwhile, the Programme Management Office has been set up at the ministry level and Institutional-Programme Management Office at the universities level. The purpose of establishing these offices is to provide support at both ministry and university levels in the implementation stage of planning and executing the National Higher Education Strategic Plan Beyond 2020. The universities are required to provide information about the key performance indicators set by the Ministry of Higher Education for the purpose of monitoring and controlling. Information provided by the public universities is audited by the government, through its steering committee sets to oversee the universities performances according to the strategic plans. As stated in the National Higher Education Strategic Plan 2007-2010 the Programme Management Office operating unit includes the: (1) Project Delivery; (2) Process and Mentoring; (3) Monitoring and Reporting; (4) and Communication (Ministry of Higher Education, 2007b). From the Agency Theory perspective, the implementation of monitoring and auditing system helps the principal to obtain the required information on the universities performance and thus mitigates any agency problem that may surface in the process. As a key principal in this relationship, the government has established such system to guarantees that the return on its investment in higher education is secured (Lane & Kivistö, 2008). The existence of Malaysian Research Assessment Instrument is one of the way how research performance in public universities has been scrutinized over the years.

This study investigates the effects of government strategic plans and funding reforms initiated by the Federal Government on public universities in Malaysia. The university is expected to incorporate the reforms wholly as stipulated by the government. Thus, this study intends to investigate whether the funding reforms are the leading cause towards achieving the desired changes in the universities. Agency Theory elaborates the relationship between the authority that initiates the strategic plan as 'principal' and the institution supposed to adopt the plan as 'agent/s'. This theory then interrogates failures in implementing plans from the principal to the agent by identifying the information asymmetries that occur due to incomplete information and goal conflicts where agent has pursued a different objective other than the ones mandated by the principal (Kivistö, 2005, 2008).

Given the problem identified in the relationship between the government and university, this study seeks to address on the question of how changes in Malaysian Government funding of public universities impacted on their strategic planning. The channels in which this problem can be mitigated are by either reducing goals conflicts between both parties or closing the gaps of information asymmetry.

## 2. Literature Review

Changes in educational systems have led many countries to restructure their resources to finance higher education and to ensure it aligns with overall government objectives (Ahmad, Farley, & Naidoo, 2012b; Johnstone, 1998), in order to compete in the competitive global environment. As a result, almost all countries today rely on large scale government funding to improve the quality of higher education (Roger, 1995). In Malaysia for example, funding of all public higher education institutions is allocated in the country's annual budget. An allocation of RM14.1 billion was granted to the Ministry of Higher Education to improve the quality of higher learning for the year 2009 (Pricewaterhouse Coopers, 2009). Furthermore, Johnstone (1998) points out that the reasons for financial reform in higher educational can be categorised into five areas: (1) expansion and diversification; (2) fiscal pressure; (3) market pressure; (4) demand for greater accountability; and (5) demand for greater quality and efficiency.

Despite the pressure to compete globally, the funding and resource allocation mechanisms in Malaysia are still dependent on the traditional approach which is largely based on negotiation between public universities and the Ministry of Higher Education. Although a Modified Budgeting System of accountability and transparency of budget allocation (based on output-oriented mechanisms) was introduced by the Federal Government in 1997, in practice this system was never implemented and the final allocation of budget is determined through negotiation (World Bank/EPU, 2007). More recently, the development and operational budget expenditure for all public institutions has been affected by the tight budget allocation of the Ministry of Higher Education (Mokhtar Nawawi & Azizan Asmuni, 2003). This tight budget is due to the increasing number of higher education institutions and government initiatives in upgrading the status of institutes and colleges to university level (Hamzah, 2009). With time, the traditional mode of funding for higher education in Malaysia may not be suitable for a challenging global environment, and hence, the World Bank/EPU recommended an improved financing model for Malaysian universities (2007). The report identifies three strategies to diversify the funding: (1) increased resources diversification and cost sharing; (2) balanced growth in university and non-university sub-sectors; and (3) incentives for private growth.

### 2.1 Agency Theory

There have been many theories applied in analysing issues related to change in strategic policy and the relationship between the government and universities. Recent literature shows that Agency Theory has emerged as a useful and important theoretical framework in the discipline of strategic management (Ahmad, Farley, & Naidoo, 2012a; Kim & Mahoney, 2005) and in empirical research on policy change in higher education (Kivistö, 2005; Lane & Kivistö, 2008; Liefner, 2003; Rungfamai, 2008; Schiller & Liefner, 2006). Focussing on the processes and problems of initiating policy change from the principal to the agent/s, it examines organisational thinking and behaviour of the agent/s and the relationship between the agent/s and principal to highlight goal conflicts and information asymmetries (Rungfamai, 2008). According to this theory, information asymmetries occur because information about the activity has not been communicated properly from the agent/s to the principal and the agent/s possesses more information about the task assigned. Meanwhile, goal conflicts happen when the agent/s and principal have different objectives and the agent/s undertakes a different course of action than the one desired by the principal (Kivistö, 2005). Taken together, information asymmetry and goal conflict constitute the *Agency problem* – the possibility of opportunistic behaviour on the part of the agents (universities) that works against the welfare of the principal (government). According to Rungfamai (2008) the relationship between government and university is crucial in influencing the outputs of government educational policy as well as the university productivity. In such circumstances, it becomes difficult for the principal to monitor the

actions taken by agent/s (Lane & Kivistö, 2008; Milgrom & Roberts, 1992). As a result, the resources and funds allocated for the activity are not effectively utilised by the agent/s and the results are inconsistent with the desired outcomes of the principal. Leruth and Paul (2006) added that the important element of any Agency Theory is to specify any observable that is the main element of the contract.

Agency theory focuses on the central question of how the Principal can control the Agent/s in a context of information-asymmetry and goal conflict. Since universities are complex organisations and their activities are difficult to monitor, Liefner (2003) suggested that the government can link funding to performance and the principal (government) can allocate funding based on the agent (university) performance and at the same time reduce unsuccessful activities. As a result, with the implementation of performance based resource allocation; less motivated agent/s feel the need to work harder according to the goals set by the principal while successful agent/s will be more motivated with incentive for performing the task Liefner (2003).

This research intends to use Agency Theory as a framework to study the relationship between government and public universities in Malaysia. It also attempts to identify and alleviate goal conflicts and/or information asymmetry in the implementation of the National Higher Education Strategic Plan beyond 2020 and National Higher Education Plan 2007-2010. Previous research in non-western countries has also used Agency Theory with success. Agency Theory has been used in studies on some public companies in Malaysia (Mazlina & Ayoib Che, 2011), and it does not show any incompatibilities with cultural, political and social conditions in Malaysia and can be used for future research. Agency Theory needs more empirical research and testing in order to be a more reliable and useful tool in higher education research for analysing and developing an understanding of the relationship between the government and public funded universities (Kivistö, 2005).

Agency Theory is also useful for examining the relationship between the government and higher education institutions and the shifts in this relationship when changes are introduced in funding mechanisms (Gomez-Mejia, Tosi, & Hinkin, 1987; Hill & Snell, 1989; Hoskisson, Johnson, & Moesel, 1994; Kim & Mahoney, 2005).

### **3. Research Method**

The research design of this study is drawn from a combination of the qualitative and quantitative approaches, where several data collection strategies are adopted for the purpose of triangulation. In accordance to that, this research selected the quantitative survey as a major data collection instrument and the focus group interviews to support data obtained quantitatively. This pragmatic approach results in the use of triangulation strategies in providing additional insights into the study and using the qualitative results to illuminate the quantitative data. The adoption of different techniques is designed to gain in-depth information on the educational funding reforms and government strategic plans in order to reduce the information asymmetry and goal conflict.

The researcher conducted the focus group interviews in four different batches of respondents from the participating universities. Four public universities of different categories were selected; two with Research/Apex Universities status and two others of a Comprehensive University and Focused University status. The respondents were chosen to create a diverse and representative sample from universities in Malaysia. The findings reported based on the four focus group interviews conducted with universities labelled as University A, B, C and D.

#### *3.1 Data Analysis Strategies*

One sample Wilcoxon signed rank test is a non-parametric alternative method of one sample t-test, which is used in this study to test whether a sample median of the measurement is equal to a specified value. The truth average value greater than four (neutral) was tested, which indicate the respondents' agreement or disagreement with each statement on the impact of government funding changes on Malaysia public universities and their approach to strategic planning in reducing goal conflict and/or information asymmetry.

The Likert scale is used in the survey questionnaire ranging from 1 = strongly disagree to 7 = strongly agree. Here, the value of one to three indicate the respondent's level of disagreement and the value five to seven indicate their level of agreement. However, the decision to employ the one sample T-test is to make comparison based on the results from the non-parametric test by assessing whether there is a reduction in goal conflict and/or information asymmetry.

To analyse data obtained from the focus group interviews in a meaningful way, findings were coded and themes were drawn from the research questions. This is necessary in order to identify patterns and trends emerging from both the survey and focus group interviews. These patterns were then organized and cross-examined with the survey and interview results. In order to make comparison between qualitative and quantitative data, the matrix or discussion method were used to illustrate the findings (Creswell & Plano Clark, 2007).

## 4. Finding

### 4.1 Results from Survey Questionnaires

Figure 1 and 2 present the distribution of total respondents' in the main survey questionnaires according to their demographic profile which are university category and designated position. In total 335 set of questionnaires were distributed to respondents from twenty Malaysian public universities.

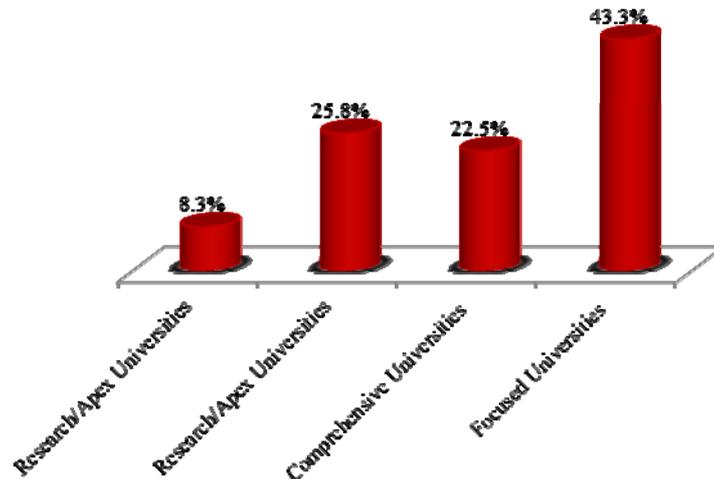


Figure 1. University category

Out of this total, 120 (35.8 per cent) respondents returned the completed survey questionnaire and from the 120 respondents, 52 of them (43.3 per cent) were from the Focused University groups. The Research/Apex Universities groups came up with a response rate of 34.1 per cent and 22.5 per cent from Comprehensive University groups. The results are presented in Figure 1.

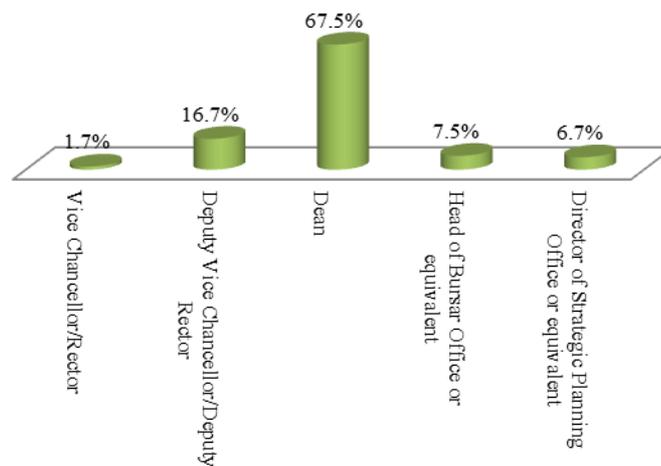


Figure 2. Designation position

Most respondents participating in this study are holding positions as Dean (67.5 per cent), and Deputy Vice Chancellors / Deputy Rectors (16.7 per cent). Approximately 7.5 per cent of the respondents are Heads of Bursar Offices or equivalent. Finally, only two respondents (1.7 per cent) are Vice Chancellors. These results are illustrated in Figure 2.

Table 1 shows the reliability test results which are categorised into two components; information asymmetries and goal conflicts. There were three questions that categorised under the information asymmetries and eleven

questions were related to the goal conflicts. There were asked to rate their agreement based on a 7 - point Likert scale, ranging from 1= strongly disagree to 7 = strongly agree.

Table 1. Results of reliability analysis for informational asymmetries and goal conflicts

Variables	Cronbach's Alpha	Number of Items
Information Asymmetries	0.89	3
Goal Conflicts	0.95	11

The Cronbach's alpha coefficients were found to be more than 0.70 for both items related to information asymmetries and goal conflicts and according to Yockey (2011) the coefficient alphas range from 0.70 to 0.79 is fair, 0.80 to 0.89 as good and 0.90 above as excellent. Based on Yockey's range, this study found that the Cronbach's alpha for information asymmetries were good and goal conflicts were at excellent range. Therefore, all items in the questionnaire were retained in the inferential analysis.

Table 2. Results of one sample Wilcoxon signed rank test and one sample t-test related to information asymmetries

Items	One	Sample	One Sample T-test				
	Wilcoxon Rank Test	Signed	Mean	t	Sd	df	Sig
Monitors institutional performance according to government objectives	.000	6	5.86	18.34	1.11	119	.000
Provides fast and flexible analysis and reporting of data to assist accurate strategic decisions	.000	6	5.68	14.74	1.25	119	.000
Produces quality and timely information relevant to government requirements	.000	6	5.63	15.07	1.19	119	.000

Table 2 presented the results of statistical test from both parametric and non-parametric tests which demonstrated significant values of  $p = 0.000$ . The mean scores in each of the item were more than 4 (neutral). Overall, the respondents agreed that government funding changes in Malaysian public universities have altered the approach in strategic planning through reduction in information asymmetry.

Table 3. Results of one sample Wilcoxon signed rank test and one sample t-test related to goal conflicts

	One	Sample	One Sample T-test				
	Wilcoxon Rank Test	Signed	Mean	t	Sd	df	Sig
Improved direction of the university towards the desired goals of the government	.000	6	5.89	19.41	1.07	119	.000
Improved strategic planning focus to increase responsiveness in line with government objectives	.000	6	5.94	20.46	1.04	119	.000
Improved the operation and planning process for information in line with government objectives	.000	6	5.92	20.31	1.03	119	.000
Greater alignment between government strategic planning and institutional strategic planning	.000	6	6.03	21.00	1.06	119	.000
Increased accountability of your institutions to meet government objectives	.000	6	6.04	22.02	1.02	119	.000
Better alignment of institutional objectives with government objectives	.000	6	6.08	22.08	1.03	119	.000
Provides incentives for improving academic performance, quality, and efficiency to better align with government objectives	.000	6	5.83	18.88	1.06	119	.000
Improves the use of performance indicators to align with government objectives	.000	6	5.88	19.71	1.05	119	.000
Establishes steering mechanisms to ensure that government policy goals and objectives are addressed	.000	6	5.70	15.09	1.23	119	.000
Improved financial resources' strategy in accordance with government objectives	.000	6	5.65	14.11	1.28	119	.000
Increased use of internal resources as part of the strategy to generate funding according to government objectives	.000	6	5.63	13.47	1.33	119	.000

The results indicates that the median difference from the value of four is very significant (Sig = 0.000,  $p < 0.0005$ ) for all items related to goal conflicts (see Table 3). Essentially, the one sample t-test results indicate statistically significantly difference from the test value of four at  $p < 0.0005$ . Therefore, it is proven that the changes on the government funding systems bring positive impact on the approach to strategic planning in Malaysian public universities and hence, reduce the agency problem. The results obtained support the objective of the study as a difference in the median values was found.

#### 4.2 Results from Focus Group Interviews

Respondents from Universities A, B, C and D pointed out that the public universities objectives must be aligned with the government's objectives due to the financial changes under the implementation of National Higher Education Strategic Plan beyond 2020. Such response indicates that the government's strategic planning is always used as a term of reference for universities to formulate and implement their strategic planning.

Nevertheless, a respondent from University D pointed out that the funding changes have also created a challenge for them in implementing strategic planning. This is because the money allocated for the purposes of operation and development has not shown any noticeable increase to the university due to inflation and increase in cost.

The findings also indicate that funding changes have influenced how the universities manage clear and effective communication with the Federal Government. A senior officer at University C emphasised the existence of greater communication between the university and government, although he also hinted a sense of helplessness or resentment at having to constantly report to the government.

A respondent from University B argued that they have always maintained good communication with the government since they depend on them for funding, but noted that the current funding constraints have increased the level of communication. However, despite the reservation on having to supply constant information to the government, respondent from University B argued that such communication is needed for the government to have a better understanding of the areas that need improvement.

Faced with the need for effective communication, the government has made a number of efforts to improve the mechanisms for monitoring communication with the universities. Programme Management Office has been set up at Ministry of Higher Education to oversee the implementation of National Higher Education Strategic Plan beyond 2020 and the National Higher Education Action Plan 2007-2010. Meanwhile, every university has a small Programme Management Office known as Institutional-Programme Management Office to facilitate activities at the institutional level and help the project team at the ministry level to obtain relevant data, information and expertise from the university. These mechanisms help to improve communication between the university and government.

In addition, the CAPs act as a platform to monitor the implementation of government strategic plan. A respondent from University D complimented the efficiency of CAPs which co-ordinates all activities related to teaching and research. Respondent at University A explained that there are many mechanisms used in order to monitor the quality of teaching and research at the public universities

Key performance indicators have been introduced by the university to achieve specific targets set by the government and to observe university performance in meeting these targets. Findings gathered from focus group interviews at University A, B, C, and D show that respondents agreed with the implementation of key performance indicators by the Federal Government. A respondent at University C spoke positively of the key performance indicator and he perceived it as a tangible target in the long run in implementing the strategic plan.

In relation to performance measurement, respondents clearly stated that the university would respond and do whatever is required to meet the key performance indicators and the desired objectives stated by the government in its strategic plan, but at the end of the day, the university made the decisions about how to benchmark the key performance indicators and the government objectives. Evidence from this study also indicates that the Federal Government is using the audit mechanism to monitor the performance of universities.

The findings indicate that the respondents are aware of these changes and understand their responsibilities towards the key stakeholder which is the taxpayers who are the 'financiers' of higher education and thus universities are obliged to perform their role effectively. With regard to financial monitoring, respondents in the study comprehend that the existence of departments such as Malaysian Research Assessment, CAPs and financial auditing mechanism are tools developed by the government to monitor the programs and activities of the universities.

## **5. Discussion**

Prior studies have noted that the strategic planning is an important policy instrument to improve the development agendas of public universities in Malaysia in line with the government objectives that aim to increase the quality of higher education system in T&L, R&D, and quality of university management (Hussin, Yaacob, & Ismail, 2008; Singh & Schapper, 2009; World Bank/EPU, 2007). The findings of those studies were congruent with data obtained from the focus group interviews of this study. The result shows that the government strategic plans have been used as the main reference in formulating the universities strategic plans. A possible explanation would be, in reality the Federal Government has provided almost 90 per cent of funding to Malaysian public universities (Ministry of Higher Education, 2007b) and therefore, as a major fund provider, the government would require its agents, the universities, to align their activities according to government's objectives. In view of the Agency Theory, the accomplishment of common objectives by both parties, the agent and principal, will lead to favourable outcome and benefit the principal on a wider perspective (Kivistö, 2008). This theory clarifies that goal conflicts are likely to occur when the agent/s have different goals than their principal.

The results of this study indicate that the Federal Government has a strong interest in managing clear and effective communication with the Malaysian public universities. This present finding corroborates the idea of Kivistö and Hölttä (2008), who suggested that information asymmetries exist in the operation of higher education institutions and without government intervention, information asymmetries would lead to degradation of quality of teaching and research. The respondents of the survey questionnaires agreed that public universities should provide the government with relevant quantitative data and qualitative information on a regular basis. Thus, the analysis undertaken from focus group interviews confirmed that the communication with the Federal Government has improved and the universities are now communicate more frequently since the implementation of government blue prints and also funding reforms. These findings further support the argument from Leruth and Paul (2006) who pointed out that agent/s should be accountable and make information available to public.

The results from the focus group interviews have been a mixed one. At one point, the respondents are in agreement that communication between universities and government has improved in terms of its frequency but in another instance, the communication process is hampered by the lack of co-ordination within the Ministry of Higher Education. As a result of overlapping function of few departments in the Ministry, duplicate request of information from these departments has posed inconvenience on the affected universities. However, a respondent from University B confirmed that these miscommunication problems are addressed by the Ministry of Higher Education.

As mentioned in the literature review, the Federal Government has set up the Programme Management Office to monitor public universities performance and implementation of government strategic plans. Meanwhile, the Institutional-Programme Management Office has been established at the institutions level to coordinate the monitoring activities and response directly to Programme Management Office in order to control the university behaviour in line with the government objectives. Nevertheless, the Malaysian Research Assessment Instrument has been used to monitor universities research performances. The mechanism that tied performances with funding will contribute to better alignment with the government objectives and this monitoring system helps the government to control teaching and research activities at the universities. In other words, the government can easily gather information from the database in order to allocate funding based on the universities current performances.

In this research, it was discovered that the key performance indicators were used to provide reliable information on the current university performance and to ensure all activities on the strategic plan are aligned with the Federal government objectives (Cave, Kogan, & Hanney, 1989; Pugh, Coates, & Adnett, 2005). In the Agency Theory literature, the performance indicators implemented by the government can be used to minimise the inappropriate agent/s behaviour (Leruth & Paul, 2006) and information provided to measure the output of T&L, and R&D in the university can be used to reduce the information asymmetries (Kivistö & Hölttä, 2008). Therefore, in order to maximise the public investment, the universities are required to establish performance indicators that clearly addressed the government objectives. Moreover, the government mechanisms in reducing information asymmetry promote activities and achievements in universities operations with the government objectives. The action taken by the Federal Government in the adoption of performance indicator to assess universities performance and the realisation of the National Higher Education Strategic Plan 2020 have proven the government effort to make Malaysia as a regional centre of excellence in education.

Liefner (2003), and Kivistö and Hölttä (2008) argued that in reality it is hard for the principal to observe the outcomes of the higher education institutions. This agency problem known as adverse selection has resulted from the problem of incomplete information. This is due to the fact that higher education institutions produce a mix of products comprising T&L and R&D coupled with the complexity of the institutions itself. Although in reality it is difficult to assess outcomes generated by the university, conversely there are several methods in which the government can employ to reduce this agency problem. In this present study, findings from qualitative data confirmed that the audit mechanism has been used by the Federal Government to monitor the universities performances. This approach will help the principal to observe the quality of outcome produces by the public universities although the surveillance process requires a huge investment. The Federal Government sets the performance indicators that need to be achieved by the public universities. These indicators are standards prescribed by Malaysian Research Assessment and Critical Agenda Project for all universities and the universities are audited by the Federal Government. Parallel to the Kivistö and Hölttä argument that the audit approaches can be used by the government to observe outcomes produces by the universities, such audit procedures performed and its feedback help the government and university to work out any practical issues related to difficulties and improvement needed.

It is found that the audit reporting is used by public universities to produce statistics not only for government but also for stakeholders such as Malaysian Research Assessment, Institutional-Programme Management Office, and Critical Agenda Projects. Universities now produce annual report which is available to both public and government. Statistics on higher education is updated annually and accessible online through the Ministry of Higher Education website at any time. As mentioned by Kivistö and Hölttä (2008) the stakeholders have strong interest in accessing information in order to monitor the organisations activities and performances.

Results from qualitative interviews found that the Research Universities are given additional allocation of funding as an incentive to do research activities and this provision is not available to Focused Universities and Comprehensive Universities. As a result of the incentives provided, Research Universities have doubled their research efforts towards realising the government objectives. In return, the government has conferred Research University status to four public universities based on the audited performance report and in addition, the government may consider granting financial and non-financial reward to the university as a motivation for them to work harder. The close linkage and cooperation between both principal (government) and agent/s (universities) will mitigate information asymmetry and reduce conflicting goals between both parties.

## 6. Concluding Remarks

Specifically, the analysis from both quantitative and qualitative data confirmed that the public universities have used the government strategic plans as their main reference in developing the university strategic plans. In order to monitor the university performances, the government has implemented monitoring mechanisms to control and accumulate information effectively. These approaches lead to reduce the information asymmetry and guide the government with the specific information needed in effective decision making. The public universities are made accountable to produce information for the stakeholders and this finding is congruent with previous research from Leruth and Paul (2006). In addition, the elements of monitoring and controlling provide theoretical explanation of university behaviour in performing specific tasks in line with the government preferences. Agency Theory has proven that the framework can be applied to the higher education research in order to illustrate how principal-agent relationship works in the implementation of government funding changes in the developing country especially in Malaysia.

## References

- Ahmad, A. R., Farley, A., & Naidoo, M. (2012a). Analysis of Government-University Relationship from the Perspective of Agency Theory. *Journal of Education and Practice*, 3(6), 12-21.
- Ahmad, A. R., Farley, A., & Naidoo, M. (2012b). Impact of the government funding reforms on the teaching and learning of Malaysian public universities. *Higher Education Studies*, 2(2), p114. <http://dx.doi.org/10.5539/hes.v2n2p114>
- Cave, M., Kogan, M., & Hanney, S. (1989). Performance measurement in higher education. *Public Money & Management*, 9(1), 11-16.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. United States of America: Sage Publications.
- Embi, M. A. (2011). *e-Learning in Malaysian institutions of higher learning: Status, trends and challenges*. Paper presented at the International Lifelong Learning Conference (ICLLL 2011), Pacific hotel, Kuala Lumpur.
- Gomez-Mejia, L., Tosi, H., & Hinkin, T. (1987). Managerial control, performance, and executive compensation. *Academy of Management Journal*, 30(1), 51-70. <http://dx.doi.org/10.2307/255895>
- Hamzah, B. A. (2009, 19 September 2009). Public varsities produce only jaguh kampung, *Sun 2Surf*.
- Hill, C., & Snell, S. (1989). Effects of ownership structure and control on corporate productivity. *Academy of Management Journal*, 32(1), 25-46. <http://dx.doi.org/10.2307/256418>
- Hoskisson, R., Johnson, R., & Moesel, D. (1994). Corporate divestiture intensity in restructuring firms: Effects of governance, strategy, and performance. *Academy of Management Journal*, 37(5), 1207-1251. <http://dx.doi.org/10.2307/256671>
- Hussin, S., Yaacob, H., & Ismail, A. (2008). Agenda pembangunan universiti awam di Malaysia: Kesamaan dan perbezaan tindakan. *Pendidik dan Pendidikan*, 23, 1-27.
- Johnstone, D. (1998). *The financing and management of higher education: A status report on worldwide reforms*. Washington: World Bank.

- Kim, J., & Mahoney, J. (2005). Property rights theory, transaction costs theory, and agency theory: an organizational economics approach to strategic management. *Managerial and Decision Economics*, 26(4), 223-242. <http://dx.doi.org/10.1002/mde.1218>
- Kivistö, J. (2005). The government-higher education institution relationship: Theoretical considerations from the perspective of agency theory. *Tertiary Education and Management*, 11(1), 1-17.
- Kivistö, J. (2008). An assessment of agency theory as a framework for the government-university relationship. *Journal of Higher Education Policy and Management*, 30(4), 339-350. <http://dx.doi.org/10.1080/13600800802383018>
- Kivistö, J., & Hölttä, S. (2008). Information as a regulative element in higher education systems. *Tertiary Education and Management*, 14(4), 331-344.
- Lane, J. E., & Kivistö, J. A. (2008). Interests, information, and incentives in higher education: Principal-agent theory and its potential applications to the study of higher education governance. *Higher Education*, 23, 141. [http://dx.doi.org/10.1007/978-1-4020-6959-8\\_5](http://dx.doi.org/10.1007/978-1-4020-6959-8_5)
- Leruth, L., & Paul, E. (2006). A principal-agent theory approach to public expenditure management systems in developing countries. *OECD Journal on Budgeting*, 7(3), 103-131.
- Liefner, I. (2003). Funding, resource allocation, and performance in higher education systems. *Journal of Higher Education*, 46, 469-489. <http://dx.doi.org/10.1023/A:1027381906977>
- Mazlina, M., & Ayoib Che, A. (2011). Agency theory and managerial ownership: Evidence from Malaysia. *Managerial Auditing Journal*, 26(5), 419-436.
- Milgrom, P., & Roberts, J. (1992). *Economics, organization and management*. Prentice-hall Englewood Cliffs, NJ.
- Ministry of Higher Education. (2007a). Pelan strategik pengajian tinggi negara melangkau tahun 2020. Putrajaya.
- Ministry of Higher Education. (2007b). National higher education action plan 2007-2010. In M. o. H. Education (Ed.). Putrajaya.
- Mokhtar Nawawi, & Azizan Asmuni. (2003). Distance education public policy and practice in the higher education: The case of Malaysia (Part II).
- Pricewaterhouse Coopers. (2009). 2009 budget: Education. Retrieved November 11, 2009, from <http://iss2.etax.com.my/visitors/budgetHighlight.nsf/2883fbb7301ca337482574b00030219a/1fadbf6699c2d8f482574b400465b29?OpenDocument>
- Pugh, G., Coates, G., & Adnett, N. (2005). Performance indicators and widening participation in UK higher education. *Higher Education Quarterly*, 59(1), 19-39. <http://dx.doi.org/10.1111/j.1468-2273.2005.00279.x>
- Roger, K. (1995). What is higher education for? Strategic dilemmas for the twenty-first century university. *Quality Assurance in Education*, 3, 14-20. <http://dx.doi.org/10.1108/09684889510098140>
- Rungfamai, K. (2008). *Higher education and institutional-autonomy policy in Thailand: The perspective of Agency Theory*. European Master in Higher Education (HEEM), University of Tempere, Finland.
- Schiller, D., & Liefner, I. (2006). Higher education funding reform and university-industry links in developing countries: The case of Thailand. from Springer Science Business Media B.V. 2006
- Singh, J. K. N., & Schapper, J. (2009). *Policy development and globalisation of higher education: A case-study of the Research University in Malaysia*. Paper presented at the Global Higher Education: Current Trends, Future Perspectives, Penang, Malaysia.
- World Bank/EPU. (2007). Malaysia and the knowledge economy: Building a world class higher education system: Human Development Sector Reports East Asia and the Pacific Region: The World Bank.
- Yockey, R. D. (2011). *SPSS demystified: A step-by-step guide to successful data analysis for SPSS version 18.0*. Upper Saddle River, NJ: Prentice Hall/Pearson.