Financial Management Analysis in the Higher Education Institutions: Experience from Universiti Malaysia Perlis (UniMAP) (2003-2012)

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Abstract: Higher education has been one of the key elements to boost country’s development in terms of economic growth, social status and citizen well-being. Through effective higher education systems, it will benefit the public as a whole as adequate education empowers people to gain knowledge, skills and talents in order to fulfill rapid demands in competitive market trends. The government has allocated a significant amount of the national budget into the education system and it is crucial for all public universities to coordinate its financial management efficiently. Considering that financial sustainability is critical for higher education, this conceptual paper is to examine how the public university operates their financial management whether they can manage public money with Good Governance Principles or otherwise. Specifically, this paper analyzes the financial assessment in which the case study conducted by the Annual Reports from Universiti Malaysia Perlis (UniMAP) in ten years starting from 2003 until 2012. The results showed how UniMAP generate the income either through consultation activities, holdings, conferences, short courses, research grants and how UniMAP spending its budget allocation for ten years in which the research findings revealed that there was surplus between 2003 until 2009 and 2011 until 2012, while in 2010, the result showed a deficit in its financial management.

Key words: Deficit • Financial Sustainability • Fiscal management • Surplus • University

INTRODUCTION

The government is fostering every public university to manage their annual budget efficiently for the purpose of ensuring its financial management sustainability. According to Xavier in Rafizal [1] budget is defined as the financial plan on what government aims to do in a budget exercise and how it intends to spend for the economic development. In the context of government, the budget is a plan that fixed the objectives and strategies of the government in a budget year, to implement the predetermined programs and activities in achieving budget goal commitment [2-5].

Several emphasize factors have to take into account when comes to government spending so that they can generate value for money in the higher education funding system [6]. In addressing the burden, institutions and the government need to focus on methods to improve the resources on financing higher educational establishments' activities to meet the societal needs as well as to be more efficient in balancing the funding and spending [7]. Nowadays, the public aware of the essential for having higher education since it beneficial in solving numerous global problems such as poverty, economic growth, environmental and health. Moreover, global knowledge expands rapidly with new development fields and emerging new technologies. Thus, the call for higher education is automatically in massive demand. However, countries around the globe face increasing budgetary constraints when enrollment in higher education is growing [8-10]. These challenges have forced higher education systems worldwide to focus on improving productivity and ensuring good value from their investments as required by Ministry of Education [11].

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Therefore, the aim of this concept paper is to examine the financial sustainability in public university based on the annual budget provided every year for each university. In order to get a clearer picture on how public university spent and generated the money, the study was carried out from annual reports for ten years in which the experience is specifically grounded in Universiti Malaysia Perlis or also well known as UniMAP.

Background of UniMAP: Kolej Universiti Kejuruteraan Utara Malaysia (KUKUM) (presently is known as UniMAP), is the 17th public institution of higher learning and was endorsed by the Malaysian Cabinet in May 2001. The main objective of its establishment is to produce highly skilled engineers to support the country’s industrial plan. KUKUM officially started its business and academic activities on 2nd May 2002 in a temporary campus at Kubang Gajah, Arau, Perlis. Historically, the first intake consisted of 116 engineering students for the academic session 2002/2003 and started the classes in June 2002. However, in February 2007, KUKUM upgraded its status to university and this rebranding was renamed as Universiti Malaysia Perlis (UniMAP). Apparently, the number of students entering UniMAP has increased tremendously.

Most of the engineering programs at UniMAP have an electronic-based hub. However, both basic and applied studies on other domains of engineering and technology that sustain the promotion of engineering are also actively pursued. Lessons are carried as “lab-intensive” to develop engineers who are well versed in practical works as well as theoretical concepts. Also, UniMAP extends its studies fields by offering other courses such as International Business, Engineering Entrepreneurship and an MBA in Engineering Management. Although the new extension of UniMAP’s courses is not core engineering programs, however those programs still retains the engineering flair through inclusion of engineering related subjects.

Campus construction began in the 8th Malaysia Plan (RMK-8), in which the land acquisition process involving diverse stakeholders such as individual lands, lands owned by FELDA as well as MBI’s land, completed during RMK-8. However, physical development only began in the Ninth Malaysia Plan (RMK-9) (2006-2010) in several schools and developed gradually phase by phase. Currently, UniMAP has two site campuses in Pauh Putra (Kampus Alam) with an area of 1028 acres and UniCITY (Green Campus) located in Sungai Chuchuh with 253 acres of site area.

Since, UniMAP still in the stage of constructing its permanent buildings in Pauh Putra Campus and Sungai Chuchuh, its daily activities are carried out in a distributed campus all over Perlis. Consequently, the selection of UniMAP for the case study is novel since UniMAP operation is unique and its budget control will reveal critical information in terms of feasibility and applicability of this method of governance.

(Source: Gerbang Informasi UniMAP, 2009 and 2013)

Data Collection and Analysis: To ensure the validity of this research study, the secondary data was collected for the use of research evidence support. The collected data were obtained through UniMAP’s Annual Financial Report examined in the period of ten years of 2003 to 2012. The accumulated data were used to investigate the financial performance of UniMAP. All the figures utilized not only evaluated KUKUM/UniMAP operations in Perlis, but also involves overall operations including in “Anjung UniMAP” located in Kuala Lumpur and Kulim.

In this conceptual paper, income and expenditures were thoroughly analyzed to determine whether UniMAP executed surplus or deficit in its fiscal year. The data analysis of revenues and expenses also will help to identify i) how UniMAP generate its income, ii) where the funded capital comes from, iii) how UniMAP spent on certain operations costs and iv) other specific expenditures volumes. Most prominently, fiscal policy is crucial to sustainable growth. Thus, understanding the relationship between the government revenue and expenses is essential in order to evaluate budget sustainability as indicated by Chin [12]. The research analysis enables the understanding of university’s basic revenues and expenses cost structures.

Revenue Analysis: In 2003, KUKUM has received an operating income for a total of RM57,129,183. The total amount of RM54,522,065 was allocated by the government and the rest was from study fees, research grant, consultation fees and other income. As KUKUM just started in 2002, the allocation from the government and the ability to generate its income has a huge gap as compared to the following years. As shown in Figure 1, the indicator keeps increasing year by year in which the highest revenues is indicated in 2012, for a total of RM268,265,636. In parliamentary law, in order to promote the university to have established revenue in its account, Darryl [13] outlines clearly the benefits of granting some public colleges and universities...
(those with well-defined missions, student markets and tuition revenue reliability) with much greater autonomy from state control in fields related to purchasing, contracting, mission development and tuition policy to map future direction.

**Revenues Sources**

*Operating Income:* With the ever-rising demand for public higher education due to the democratization of education, public institutions faced serious challenges of operating within the constraints of their limited allocations given by the government as stated by Chan Da [14].

UniMAP had managed to obtain the highest operating income from the government support in 2012 amounting to RM268,265,636. However, in 2003 and 2004, UniMAP only received the operating income below RM90 million as compared to 2005 until 2012.

*Research Grants:* UniMAP has several types of research grants, which includes fundamental research grants, external research grant project and special grant project. The fundamental research grant is a pure research grant that UniMAP received from government research funds. For external research grant, UniMAP either receive the grant from external parties such as government bodies, other ministries or industries to do a research project in a related area. For example, selected researchers received a grant from industry, in this case is Perodua, to complete the inquiry project in the manufacturing’s field. Perodua has given UniMAP two MYVI cars as well as cash funds in order to complete the research project.

According to Faridah [15], in promoting research and innovations, the Malaysian government has provided financial support for the Research Universities (RU) in Malaysia. Moreover, government funding has become the most important source of funds to the universities to enhance their innovations and research development progress. The competition among the RU for the government and non-government grants has also become an essential element to strengthen the quality of the programmes conducted by the universities as stated by Atkinson and Blanpied [16].

Research has played a vital role to examine the rank of educational quality possessed by the university. In this context, UniMAP has successfully moved its research capabilities to a more convincing level. During the ten years fiscal analyzes (from 2003 until 2012) UniMAP had received a total of RM31,308,896.00 which includes Science Fund’s grant allocation, development grant (special research project), external research grant project and in 2007, UniMAP has accepted a major research grant under Agilent Diversity Grant. Research, development and commercialization (R and D and C) activities will be strengthened to improve visibility and international ranking. The overall pattern of revenue from research grants sources can be seen in Figure 3.

*Consultancy:* Further analysis of the revenue revealed that UniMAP had managed to bring forth its income through consultation activities either via UniMAP Holdings or KUKUM Engineering. Normally, UniMAP Holdings or KUKUM Engineering has organized a series
Fig. 3: Research Grants

of training, short courses, workshops, seminars or professional consultation advice towards their consultancy programs and services. Grounded on the business activities through consultation works, 20 percent of total income from consultations fund will be paid to the university. In comparison, to strengthen university income, the academics in both private and public universities made reference to consultancy, projects and collaboration, realized through affiliation with their respective corporations. This appears to show their conformity to the Entrepreneur model as stated by Steele [17].

For instance, UniMAP has signed the agreement with Agilent Technologies, namely Agilent-UniMAP Development Program (AUDP), in which through this consultancy program Agilent will provide the consultancy funds to UniMAP while UniMAP has to provide short courses to the selected Agilent technicians for their skills enhancements and career development in Agilent.

Based on the graph shown in Figure 4, there was no consultancy program organized in 2003, however, in the period of 2004, the first consultancy program had been held and managed to generate its income amounting to RM74,990. The analysis of profit trends keeps increasing year by year except for the period of 2010 whereby the figures were dropped from RM682,230 in 2009 to RM RM233,357. However, it increased again in 2011 and managed to achieve the highest profit in 2012 accounted for RM1,179,349.00.

Rental: In order to lesser reliance on public funding, asset-related income and rental yield among the alternative to increase public university’s revenue, for instance, improving property management and increasing utilization of buildings, land, assets of higher learning institutions including residential, retail and commercial properties [11].

In this case, UniMAP also generates its revenue through rental yield. For instance, UniMAP has several infrastructure facilities like lab equipment, sports complex, go-cart circuit, lecture halls, Dewan Kapitol, Guest Houses in which all these infrastructure facilities and equipment can be used by external parties such as industries, business people or other institutions and it will be charged accordingly and the received income will be placed on rental items.

It showed that there was a huge gap in rental income in 2010 as compared to the previous year in 2009. Based on the displayed graph as illustrated in Figure 4, the income from rental yield keeps increasing year by year in which the highest rental profits gained in 2010 amounting to RM1,757,006 as compared to 2009 which is RM181,382.

Tuition Fees and Other Fees: The highest income gained from tuition fees and other charges were in 2012 amounting to RM23,504,880 in which the income had increased 23% as compared to the previous year in 2011. Nonetheless, the lower revenue from tuition fees was in 2003 as UniMAP just established and the first batch of student intake was 116. When evaluating fees elements,
not surprisingly, that analysis trend showed instability figures. For example, for the period of 2007, UniMAP had managed to produce RM13,742,471 of total fees, however, in 2008 the total amount of fees had been decreased to 8% amounted to RM8,703,483. Nonetheless, the revenue from students and other charges had been escalated again in 2009, increased to 13% of total fees amounted to RM13,942,248 as compared to 2008. The figures trends in 2007 until 2011 had displayed inconsistency pattern as showed towards the resulted graph in Figure 5.

UniMAP cannot rely on student fees for the purpose of funding its activities as it was considered low and only contribute 10 percent of total income. In addition, UniMAP cannot simply increase the tuition fees because it was controlled by the government policy and has to be approved by the National Council of Higher Education [7].

**Other Income:** Donations on the university’s activities, admission processing fee, seminar and course fees, miscellaneous are the items under other income that can assist UniMAP to increase its revenue. For instance, if UniMAP planning to organize Robotic Camp and managed to find sponsors from industries as well as suppliers, that sponsorships will be under donations on university’s activity.

Based on the displayed data, UniMAP successfully gained other income accounted for RM652,808 in 2010 which is the highest income throughout ten years analyzes from 2003-2012. However, the lowest other income was made in 2005 amounting to only RM82,943 due to the small number of seminar and courses organized by UniMAP as shown in Figure 6.

**Expenditures Analyses:** Financial performance comprises of three stages: namely, infrastructural development, service delivery and expenditure related activities according to Hassan [18]. For the expenditure analysis, it illustrated on the money spent for the expenses in order to run UniMAP day-to-day operations. Expenditure analysis involved several costs incurred which include operating and non-operating expenses. Operating expenses, for instance, salary for personnel costs such as academic support or administrative support, supplies and services, purchase of capital assets, permanent charges, depreciation and many others while non-operating expenses consist of interest paid on debt.

According to Kitaef [19], his research analysis found that the expenses in higher education involve huge allocation as indicated below:

It is evident that the situations in various higher education institutions differ, mainly because of the different schemes of funding, size and profiles of the
institutions and there are many reasons why higher education is costly and needs more resources in relation to improving the quality of education in higher institutions. The costs of equipment, particularly for science or engineering, are high, as are the costs of libraries and other specialized facilities. In many cases, the need to recruit or retain staff with an excellent reputation in their discipline to withstand competition or expatriate professors to overcome domestic shortages of highly qualified manpower, as well as the need to import books, materials or equipment from overseas, push up costs.

Further analysis on the expenditure result disclosed that the increased scale in Figure 7 displayed similar patterns year by year in which there was no huge gap between them and it has grown moderately.

**Salary:** Expenses under salary on this analysis only meant for permanent staff as contract staff will be put under different category or vote number that has been set by the government. Further analysis, UniMAP spent on salary expenses showed that a modest number of amounts in 2003 as UniMAP just started, so it involved only trivial staff to govern UniMAP’s business activities. However, obviously that UniMAP spent a significant number of the amount to pay the salary for permanent staff in 2012 totaled RM76,592,227 due to the increasing number of permanent staff served in UniMAP as illustrated in Figure 8.

**Supplies and Services:** The expenditures under supplies and services includes of electricity, utilities, postage, stationeries, mileage claim, catering services, rental and many others. Apart from rental under revenue sources as mentioned earlier, UniMAP also spent on several rental under expenditure item such as UniMAP rent photocopy machine, water filter, transportations like buses, cars and so forth in order to operate its business activities smoothly. Further analysis found that the highest expenses on supplies and services were made in 2012 amounted RM142,274,488 whereas the lowest money spent in 2004 accounted for RM9,440,517. The overall pattern of supplies and services expenditures can be seen in Figure 9 below.

**Purchase of Capital Assets and Permanent Charges:** Purchase of capital asset will be divided into two categories, i.e., asset and inventory. If UniMAP plans to
purchase office equipment, lab equipment or furniture which is the value amount more than RM3,000, therefore these expenses will be categorized under asset item. Meanwhile, any expenditure for furniture, office equipment like a printer, scanner that is less than RM3,000 but more than RM500, therefore such expenditures will fall under inventory item. UniMAP also needs to spend on permanent charges such as pension scheme for pensioners, Cash Money Award in which all these expenses specifically for permanent staff.

As demonstrated in Figure 10, the overall pattern of capital assets and permanent charges is having up and down of graph scales, in which there was the increased

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Revenues (RM)</th>
<th>Expenditures (RM)</th>
<th>Surplus/Deficit (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2003</td>
<td>57,129,183</td>
<td>34,634,041</td>
<td>22,495,141</td>
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<tr>
<td>2</td>
<td>2004</td>
<td>74,513,852</td>
<td>55,537,244</td>
<td>18,976,608</td>
</tr>
<tr>
<td>3</td>
<td>2005</td>
<td>97,310,499</td>
<td>79,083,249</td>
<td>18,227,250</td>
</tr>
<tr>
<td>4</td>
<td>2006</td>
<td>104,519,244</td>
<td>104,266,720</td>
<td>252,524</td>
</tr>
<tr>
<td>5</td>
<td>2007</td>
<td>146,276,992</td>
<td>128,423,965</td>
<td>17,853,027</td>
</tr>
<tr>
<td>6</td>
<td>2008</td>
<td>156,163,283</td>
<td>152,750,976</td>
<td>3,412,307</td>
</tr>
<tr>
<td>7</td>
<td>2009</td>
<td>201,725,609</td>
<td>187,137,783</td>
<td>14,587,826</td>
</tr>
<tr>
<td>8</td>
<td>2010</td>
<td>184,394,242</td>
<td>196,773,548</td>
<td>(12,379,306)</td>
</tr>
<tr>
<td>9</td>
<td>2011</td>
<td>226,530,588</td>
<td>224,011,669</td>
<td>2,518,919</td>
</tr>
<tr>
<td>10</td>
<td>2012</td>
<td>268,265,636</td>
<td>264,489,568</td>
<td>3,776,068</td>
</tr>
</tbody>
</table>
ratio of capital asset expenses in 2009. Whereas the highest ratio for permanent charges obviously in 2009. The lowest expenses for both capital assets and permanent charges were made in 2003.

**Time-Trend Analysis on Revenues and Expenditures:**
The overall pattern of income and expenses illustrated in Figure 11 clearly showed that the revenue lines from 2003 until 2012 were higher than the expenditures except for the period of 2010 in which the expenditure line pattern was more than revenues, thus created to budget deficit. However, both up and down lines, i.e. revenues and expenditures not displayed the huge difference between them.

Through budget performance results as demonstrated in Figure 12, clearly we can see that UniMAP was faced with a budget deficit in 2010. The main factor of budget deficit happened in 2010 because of total income was gradually reduced by the government in which the reduction cost accounted for RM27.2 million as compared to 2009. When revenues failed to cover operating expenditures, thus deficit has occurred.

However, the government has their reason cutting down the budget in several government sectors including Ministry of Higher Education which this kind of practice directly gives impact to UniMAP as well. According to Cheong [20], if government expenditures are not gradually reduced, the budget deficit is expected to worsen further and more borrowings are required to finance the deficit, thus further increasing the level of national debt to possibly unsustainable levels. When budget in the higher education sector has been decreased, public universities have to take their initiatives to generate more income in order to compete effectively in academic industries.

Additionally, the term funding reform, expanded funding, cost sharing methods and entrepreneurship always has been used to raise the necessary funds for Higher Education Institutions [7]. In practice, the possibilities to gain more income can be generated through investments, campus services, student tuition and fees, alumni fundraising and royalty revenue from commercialization and patents [7].

**Recommendations:** To overcome the problem of budget deficit, several recommendations have been identified as follows:-

- UniMAP staff should have the knowledge of best practices in financial management, in order to stabilize or reduce the rate of debt accumulation while adopting the right policy to strengthen revenue collection: Spending plans are subjected to the amount of government grants and the availability of cash. Since the government grants were recognized only at the beginning of the year and the allocation fund received quarterly, UniMAP should utilize best practices in financial management. This is because budget planning more to “apply and hope” and guessing-game type as there was no guaranty that the amount requested will be approved as occurred in 2010 whereby the budget allocation for UniMAP has been cut down by the Ministry of Higher Education as compared to previous years. We must remember that budgets were developed on established expenditure based on the size of university’s manpower and campus facilities as well as the student population. If the operating expenditure overrun the revenue due to shortfalls of government grants, definitely deficit is something that cannot be avoided as indicated by Ainun [21]. Therefore, it is essential for the UniMAP staff to have sufficient knowledge pertaining to the financial management in order to enhance the efficiencies and effectiveness in handling public money.
- All of the departments in UniMAP should be operated at main campus located in Pauh Putra instead of functions in several locations all over Perlis: To reduce the rental cost for buildings, UniMAP should progressively develop its main campus in Pauh Putra. Currently, UniMAP still not operates under one roof on its main campus. It has been practiced from its official date in 2002 until now, UniMAP has operated in distributed campus all over Perlis. As a result, this had increased the rental costs as UniMAP has to rent several buildings to run its academic activities. UniMAP distributed campus is everywhere in Perlis with over 30 locations across the state of Perlis such as campus in Kubang Gajah, Kangar, Seriab, Kuala Perlis, Sg Chuchuh, Simpang Empat, Jejawi, Pauh Putra, just name a few.

The first campus site is situated in Kubang Gajah, where laboratories and lecture theaters are located. Teaching facilities are mainly placed in Kuala Perlis, Kubang Gajah, Jejawi and Pauh, Chancellery offices, as well as the University Library are located at Kangar and Pauh. Some administrative offices are in Jejawi and around Kangar. Students live either in a nearby residential area at Bintong, Wang Ulu, or in several housing estates in Kuala Perlis and Pauh. With this massively distributed campus, UniMAP spent a considerable amount of budget allocation on the monthly rental cost of its buildings.
UniMAP not only has to cover its building rental but also need to pay for monthly parking fees for not having its buildings and lands. Therefore, if the government can increase development and operating income, it can cover the capital expenditure of UniMAP relating to the construction of building and campuses. As a result, all departments in UniMAP can be centralized or operated on its main campus located in Pauh Putra instead of functions in several locations all over Perlis.

- Termination of certain activities such as dinner with industries will assist UniMAP in reducing its expenditure costs: UniMAP should be able to control its crisis management in order to reduce its expenses costs. For example, UniMAP should terminate certain activities like dinner with industries, celebrating Hari Raya with industry partners and so forths. Moreover, these activities involved extensive allocation and surely will increase the expenses cost.

CONCLUSION

The result from this analysis showed that there was a surplus in budget financial performance except for 2010 whereby there was a budget deficit. Therefore, UniMAP has taken several alternatives, for instance, cut cost in certain areas, promote new financial management practices in its administration and thoroughly generate its income, good governance exercises in handling public money and much more. In addition, deficit management will be driven by efficient and productive spending while revenue enhancement measures will be further strengthened through the utilization of best practices in financial management.

REFERENCES


