



**THE PERCEIVED USEFULNESS OF ACTIVITY-
BASED COSTING INFORMATION IN A PUBLIC
MULTI-CAMPUS UNIVERSITY SYSTEM:
A CASE OF UNIVERSITI TEKNOLOGI MARA
(UiTM)**

BY

JAMALLUDIN HELMI BIN HASHIM

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International Islamic University
Malaysia**

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ABSTRACT

The present study was motivated primarily by the notably void facet in the management accounting literature with respect to the application of contemporary cost management techniques; i.e. Activity-based Costing (ABC), in a public, service-oriented and higher education institutional setting. The purpose of this study is to develop a theoretical benchmark that can be used to calculate the cost of education of Bachelor in Accountancy (BACC) in Universiti Teknologi MARA (UiTM). This study intends: (i) to develop the ABC model for the UiTM to determine the cost of BACC programme; (ii) to compare the cost of the BACC programme produced by the ABC system against the existing (traditional) costing system; (iii) to investigate the differences in perceptions on the usefulness of costing information produced by ABC (with regard to its quality and functionality) compared to the traditional costing system; (iv) to investigate the relationship between contextual factors and perceived usefulness of ABC information in a public multi-campus university system; and (iv) to examine the differences in perceived usefulness of the ABC system between users and preparers of the costing system. This study utilised a mixed methods approach using the quantitative as the dominant approach and complement with the qualitative approach that explain the “why” part. Using the professional software, ABM-SAS, the actual education expense figure for BACC in the year 2004 was used to develop the ABC Model in the first phase. In the subsequent phase, the data was collected using survey questionnaires that were distributed to 153 respondents across twelve branch campuses including the main campus at Shah Alam, Selangor. Finally, the post survey semi-structured interviews with twelve selected personnel were conducted. The cost computed using the ABC Model is lower compared to the cost from the traditional (current) method, i.e. RM 8,678.54 and RM 10,509.99, respectively. The result from the quantitative analysis indicated that the respondents perceived higher functionality of the information produced by ABC compared to the traditional costing system. Furthermore, there are also several contextual factors that have significant relationship with perceived usefulness of ABC information. Dissatisfaction with the current costing system was found to have a significant relationship with POQ and POF, whilst FCIT has a significant relationship with POQ. The statistical analysis also found that there is no significant difference in perception towards usefulness of ABC information between users and preparers. The qualitative approach does not just provide some descriptive explanation beyond the hypothesis testing but it also provides some complementary results to the quantitative results. The findings from the present study provide some understanding on costs, its causes, the identification of the resources to undertake specific activities, as well as to provide management with relevant information for various decision making process. The knowledge of successful implementation of any costing innovation may contingent upon several factors will assist them to appreciate the importance of using a sophisticated costing system to cope with the uncertainties in the educational environment.

الملخص

كان الدافع وراء هذه الدراسة بشكل أساسي توفير المؤلفات في المحاسبة الإدارية فيما يتعلق بتطبيق التقنيات المعاصرة وإدارة التكاليف، أي التكاليف على أساس النشاط (ABC)، في إطار التعليم العام، وخدمة المنحى والتعليم العالي. والهدف من هذه الدراسة هو وضع معيار النظرية التي يمكن استخدامها لحساب تكلفة في التعليم من البكالوريوس في المحاسبة في جامعة مارا للتكنولوجيا (UiTM). وتنوي هذه الدراسة إلى تطوير نموذج ABC ل UiTM في تحديد تكلفة برنامج البكالوريوس في المحاسبة والثاني لمقارنة تكلفة البرنامج التي ينتجها نظام ABC ضد النظام التقليدي القائم والثالث لمعالجة الاختلافات في التصورات على فائدة المعلومات التي تنتجها بتكلفة ABC فيما يتعلق بالتنوع والوظيفة بالمقارنة إلى النظام التقليدي والرابع لمعالجة العلاقة بين العوامل السياقية وفائدة متصورة من معلومات ABC في النظام الجامعي المتعدد فرعاً، و الرابع للنظر في الخلافات في فائدة متصورة للنظام ABC بين مستخدمي ومعدّي للنظام التكاليف. تخدم هذه الدراسة المناهج المختلطة باستخدام كمية باعتبارها النهج السائد واستكمالاً للنهج نوعي التي تفسر جزء "لماذا". مع استخدام البرامج المهنية، واستخدمت ABC-SAS، على حساب التعليم الفعلي لشخصية البكالوريوس في المحاسبة في عام 2004 لتطوير نموذج ABC في المرحلة الأولى. وفي المرحلة اللاحقة، تم جمع البيانات باستخدام الاستبيانات التي وزعت على 153 شملهم الاستطلاع عبر 12 فروع بما في ذلك الحرم الجامعي الرئيسي في شاه علم، سلاغور. وأخيراً، أجريت الدراسة آخر والمقابلات شبه المنظمة مع 12 الموظفين المختارين. وتحسب التكلفة باستخدام نموذج ABC أقل بالمقارنة مع تكلفة من أسلوب التقليد الحالي أي RM 8,678.54 و RM10,509.99 على التوالي. وأشارت نتيجة التحليل الكمي من المستطلعين أن ينظر إلى أعلى وظيفة من المعلومات التي تنتجها ABC مقارنة مع نظام التكلفة التقليدي. وعلاوة على ذلك، وهناك أيضاً العديد من العوامل السياقية التي لها علاقة كبيرة مع فائدة متصورة

من معلومات ABC. تم العثور على عدم الرضا عن نظام التكلفة الحالي أن يكون لها علاقة ذات المعنى مع POQ و POF في حين FCIT لديه علاقة ذات المعنى مع POQ. كما وجد من التحليل الإحصائي أنه لا يوجد اختلاف كبير في التصور نحو فائدة معلومات ABC بين المستخدمين والمعدّين له. وكذلك أن النهج النوعي لا يوفر سوى بعض تفسير وصفي وراء اختبار الفرضيات ولكنه يوفر أيضا بعض النتائج المكملّة لنتائج النهج الكمي. والنتائج المستخلصة من هذه الدراسة تقدم بعض التفاهم على التكاليف، وأسبابه، وتحديد الموارد اللازمة للقيام بأنشطة محددة، وكذلك لتوفير إدارة بالمعلومات ذات الصلة لاتخاذ مختلف القرارات. ومعرفة التنفيذ الناجح لأي ابتكار التكاليف قد تتوقف على عدة عوامل لتساعدهم في تقدير أهمية استخدام نظام التكاليف المتطور للتعامل مع حالات غير متوقعة في البيئة التعليمية.

ABSTRAK

Penyelidikan ini dijalankan untuk menyumbang kepada literature dalam bidang Perakaunan Pengurusan yang berhubung dengan aplikasi salah satu teknik pengekosan, iaitu Kos berasaskan aktiviti (Activity-Based Costing (ABC)), terutamanya dalam sebuah universiti awam. Penyelidikan ini bertujuan untuk membina suatu model teoritikal “penandaaras” untuk menilai kos bagi program Ijazah Sarjana Muda Perakaunan (BACC) di Universiti Teknologi MARA (UiTM). Justeru, tujuannya ialah; (i) membina model ABC untuk Universiti Teknologi MARA (UiTM); (ii) membandingkan kos untuk program BACC di antara sistem ABC dan sistem yang digunakan sekarang (tradisional); (iii) untuk menyiasat perbezaan persepsi kebolegunaan maklumat kos di antara sistem ABC dan sistem tradisional; (iv) untuk menyiasat faktor-faktor yang mempunyai hubungan signifikan dengan persepsi kebolegunaan maklumat-maklumat kos yang dihasilkan oleh sistem ABC; dan (v) untuk meneliti perbezaan persepsi tersebut di antara pengguna dan penyedia sistem pengekosan. Penyelidikan ini menggabungkan kaedah campuran (mixed methods), dengan kaedah kuantitatif sebagai lebih dominan, sementara kaedah kualitatif digunakan untuk melengkapi penemuan kuantitatif. Dengan menggunakan perisian professional, iaitu ABM-SAS, perbelanjaan sebenar untuk program BACC dalam tahun 2004 digunakan untuk membina model tersebut. Kemudian, angka kos yang diperolehi dari kaedah ABC dan model tradisional akan diedarkan kepada responden untuk menilai persepsi kebolegunaan. Maklumat tentang persepsi ini dikumpulkan melalui soal selidik daripada 153 orang responden di dua belas kampus cawangan termasuk satu kampus induk UiTM di Shah Alam, Selangor. Sesi temuduga pasca soalselidik juga telah dijalankan dengan dua belas orang responden yang terpilih. Kos yang dikira dengan menggunakan kaedah ABC menunjukkan jumlah yang lebih rendah (RM 8,678.54) berbanding kaedah tradisional (RM 10,509.09). Responden juga menganggap maklumat kos yang dihasilkan oleh ABC mempunyai fungsi dan kebolegunaan keseluruhan yang lebih tinggi berbanding dengan kaedah tradisional. Selain itu, terdapat juga beberapa anggubah persekitaran yang mempunyai hubungan signifikan dengan maklumat ABC. Semakin tinggi ketidakpuasan hati terhadap sistem pengekosan sedia ada semakin positiflah persepsi terhadap kualiti dan fungsinya ABC, sementara IT hanya mempunyai hubungan signifikan dengan fungsi ABC sahaja. Analisa juga mendapati tiadanya perbezaan signifikan terhadap kualiti dan fungsi ABC yang di kalangan pengguna dan penyedia maklumat. Analisa kualitatif juga telah menyediakan penjelasan melebihi dari hanya ujian hipotesis dengan memberikan, semada maklumat yang menyokong penemuan statistik, atau sebaliknya bertentangan samasekali. Penemuan-penemuan kajian ini juga membekalkan beberapa penjelasan untuk memahami kos, penyebab-penyebabnya serta isu pengurusan sumber untuk menjalankan aktiviti-aktiviti tertentu di samping menyediakan pengurusan dengan maklumat yang relevan untuk pembuatan keputusan. Dengan memahami faktor faktor kejayaan pelaksanaan sesuatu inovasi, ia dapat membantu organisasi memenfaatkan sistem kos yang lebih sophisticated untuk menangani ketidaktentuan dalam persekitaran pendidikan mutakhir ini.

APPROVAL PAGE

The thesis of Jamalludin Helmi bin Hashim has been approved by the following:

**Nik Nazli Nik Ahmad
Supervisor**

**Muslim Har Sani bin Mohamad
Internal Examiner**

**Daing Mohd Nasir bin Daing Ibrahim
External Examiner**

**Elfatih Abdullahi Abdel Sallam
Chairman**

DECLARATION PAGE

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as whole for any other degree programmes at IIUM or other institutions.

Jamalludin Helmi bin Hashim

Signature:

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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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Date

To my parent - Hashim Yusoff and Ramsah Jusoh.

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“Faith is an essence of the mind and consent of the heart, consisting of mainly belief and trust.” E.T. Hiscox

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CHAPTER ONE

AN OVERVIEW OF THE STUDY

1.1 Background

Higher Education Institutions (HEIs) are faced with immense challenges, at least for two reasons: the rising operating costs (Alejandro, 2000; Boehner and McKeon, 2003; Evans, 2004; Fong, 2005; Milano, 2000; Tatikonda and Tatikonda, 2001) and the demand for increased accountability (Coy and Pratt, 1998; Davies and Thomas, 2002; Jarrat, 1985; Kidwell et al., 2002; McChlery and Rolfe, 2000; Mir and Rahaman, 2007; Newman, 2003).

The rise in operating costs is evidenced by the increasing cost per student all over the world, mainly in developed countries like the United States of America (USA), the United Kingdom (UK) and Australia. In the USA, for example, the National Association of College and University Business Officers (NACUBO) reported that the instructional cost per student in public colleges and universities has increased by an average of 57 per cent between 1987 and 1996. This phenomenon also concerns universities in Great Britain and Australia (Kober et al., 1996; Mitchell, 1996; Newman, 2003).

In Malaysia, the Ministry of Higher Education (MOHE) reported that on average, the country spent 4.4 percent of total public expenditure on education, including higher education (Ministry of Higher Education Malaysia, 2006). MOHE added that this rate accounted for among the largest amount spent on education as compared to Sweden (3.6 percent), Australia (3.4 percent), India (2.6 percent), Germany (2.4 percent) and the UK (2.0 percent).

This substantial amount of expenditure on education requires universities' administrations to have a more sophisticated costing technique that will provide more accurate and comprehensive cost estimates as input to the decision making process. While such development may lead to a sense of "inadequacy" of current university costing systems (Jarrat, 1985), it also indicates that there is an urgent need to improve cost control in higher educational institutions or councils; for example in NACUBO, USA; Higher Education Funding Councils (HEFCs), UK; and Department of Education, Training and Youth Affairs (DETYA), Australia. Furthermore, even in public universities, the need for accurate costing information is critical due to both the need for budgetary control and external pressures to enhance accountability.

Even though the use of Activity-based Costing (ABC) is rapidly gaining favour in service organisations (Alejandro, 2000; Cohen and Hansen, 1999; Krishnan, 2006; Newman, 2003), very limited research has been done on the usefulness of ABC in a public service setting such as the public higher education sector. Most of the few prior studies on ABC in higher education institutions focused on a single area of the university administration as a whole; for example, the university library (Newman, 2003), specific university programmes (Alejandro, 2000); or focused on only a single group of respondents, i.e. users (Duron, 2001; Evans, 2004; Granof et al., 2000) of cost accounting information.

As a more sophisticated costing system, ABC serves to focus management attention on the cost of key activities, leading them to a better understanding of what causes such costs, and what changes are necessary to reduce the costs; thus identifying opportunities for cost reduction. Accordingly, ABC also provides managers with information that enables them to make decisions concerning optimal allocation of resources. Several other benefits of ABC in higher educational institutions were