

UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

**DETERMINE THE RELATIVE EFFICIENCY OF
FACULTIES
BY USING DATA ENVELOPMENT ANALYSIS**

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

The purpose of this project paper is to evaluate the relative efficiency of faculties in a university. Universities have a main function in the process of producing high quality product to the nations and citizens. Along the process, the need of financial assistance is important to the management since government subsidies for education sector have been reduced. Therefore, the universities have to ensure that resources are fully utilized. In order to determine either the organization operates efficiently or not, performance measurement is such a thing to think about. Various methods have been introduced to aid the measurement of the relative efficiency. The main approaches employed in this research is by using Data Envelopment Analysis (DEA). The faculties of a public university in Malaysia, which is Universiti Teknologi MARA (UiTM) were selected as the Decision Making Unit (DMU). The relative efficiency of a DMU is determined through the method of comparing the efficiency between a DMU with other DMUs. Three inputs and two outputs have been assigned in this project such as number of registered students, number of academic staffs and also number of non academic staffs for inputs, while number of graduates and average results for outputs. Throughout this project, only 6 faculties were classified as efficient, and the remaining 17 faculties were inefficient. For the inefficient faculties to improve, 6 efficient faculties were set as the benchmark. This research also provide some information on how the management of inefficient faculties can act in order to improve the faculties into a better level of efficiency.

1 INTRODUCTION

1.1 Introduction

In accordance with the twenty-first century, nations will become more competitive, and yet more interdependent where their futures depend on the some aspects. The aspects include knowledge, skills and resourcefulness of its people, creating new opportunities for education, and many more. From all the stated aspects, education is one of the main concerns. However, with the absence of educational materials and equipment, plus without the quality educational 'services', educational programs are still cannot be conducted. Power (2000) stated that North America's second largest accounting are contributed by The Education and Training industry, which marked up about nearly 10 percent of gross domestic product.

Education sector is not only can be observed from a developed country, but it also can be seen from developing countries, India, for instance. In fact, up to August 2015, this country now has more than 1.4 million schools with over 227 million students enrolled and more than 36,000 higher education institutes (*Education Sector in India, 2015*). Even though India has one of the largest higher education systems in the world, but still, a lot of potential for further development in the education system can be done.

In short, higher education is one of the most important aspects of development and economic growth in any country. Specifically, higher education is an education provided by universities, colleges, and other institutions that award academic degrees. Higher education includes both the undergraduate (such as college) and the graduate (or post-graduate) levels. From a broader view, higher education gives lot of advantages neither to the graduates nor to the country. Researchers have showed that higher education graduates might have a better access to health care, better dietary and health practices, plus longer life spans. Instead of that, higher ed-