

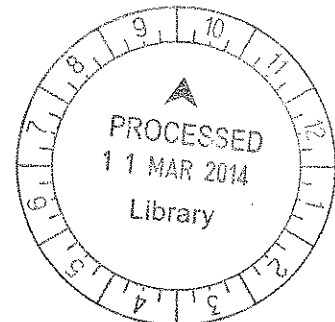
INTI INTERNATIONAL UNIVERSITY

MASTER OF BUSINESS ADMINISTRATION

Level of awareness through marketing promotional efforts: A study on biotechnology programme among pre-university students in Malaysia.

FOR REFERENCE ONLY

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Abstract

This thesis is an exploratory study that emphasize on the pre-university student's awareness and through marketers' promotional efforts about biotechnology programme. It is evident from the literature that important of marketers' promotional efforts and awareness has been heightened. The thesis will take an outlook on the biotechnology sector, especially in biotechnology education subdivision.

Consequently, the objectives of this study are to assess the pre-university students' awareness in biotechnology programme and to identify the factors that influence the awareness. Under the umbrella of promotional efforts there are 7 factors that act as the independent variables, which are performance effect (PE), recognisability (R), communication (C), promotional management (PM), sales performance effect (SP), cost effect (CE) and lastly support effect (SE). In meantime, awareness (AW) will be the lead role as dependent variable.

To achieve this objective, quantitative approach will be used with questionnaire as a tool. Smart PLS software was utilized to run reliability, validity as well as hypothesis test in order to examine relationship among constructs.

The outcome of the study indicated five factors were significant out of seven, which are PE, R, C, PM and SE. Moreover, PM was perceived to be the most significant factor that influences awareness among pre-university students about biotechnology programme.

Acknowledgement

"Cultivate the habit of being grateful for every good thing that comes to you and to give thanks continuously, because all things have contributed to your advancement, you should include all things in your gratitude", a wise quote from Raph Waldo Emerson which best describe the necessity of acknowledging others for their contributions. We have to understand no man is an island, whereby who we are today is due to endless support or aid from various people. Thus, with this awareness it is right and crucial to convey our up most gratitude to them.

First of all, my highest praise to the Almighty God for all His blessing and grace He had showered upon me. I truly believe that I am an instrument of God, whereby brought to this world for a purpose and for this core believe, I embrace all the challenges that God has put forward. My uncompromised faiths in Him have made me a stronger person each day.

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My special thanks to my fellow scholars in sharing their knowledge and help me physically, mentally and emotionally in this period of my project. I wouldn't have completed my thesis in time without their constant supports and motivations. I would also thank my distant friends, Anne Peter, Krystine Rode, Ong Choon Kuan and Putt Yoke Yin which have helped me in so many wonderful ways in completing my project. "A friend in need is a friend indeed" this is how I would describe my fellow scholars and friends.

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Declaration by candidate

I hereby declare that this research project is of my own effort except for the information that has been used from various authors that have been cited accordingly and ethically.

18th November 2013

Tiffeny Lim Ai Ji

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LIST OF ABBREVIATIONS

- Average Variant Extract (AVE)
- Awareness (Aw)
- Biotechnology Corporation (Biotechcorp)
- Communication (C)
- Corporate Social Responsibility (CSR)
- Cost Effect (CE)
- Genetically Modified (GM)
- Genetically Modified Organisms (GMOs)
- Gross Domestic Product (GDP)
- Instant Messaging (IM)
- Malaysian High School Certificate (STPM)
- Malaysian Science and Technology Indicators (MASTIC)
- Ministry of Science, Technology and Innovation (MOSTI)
- National Biotechnology Policy (NBP)
- Partial Least Square (PLS)
- Performance Effect (PE)
- Promotional Effort (PE)
- Promotional Management (PM)
- Recognisability (R)
- Sales Performance Effect (SP)
- Statistical Product and Service Solutions (SPSS)
- Structural Equation Modelling (SEM)
- Support Effect (SE)

Chapter 1: Introduction

1.1 Chapter preview

Higher education sector especially the private institute are vigorously competing to be on top of their games, thus it is crucial for higher education institutions to put adequate attention to their promotional efforts in order to derive an effective output. Nevertheless, each programme offered by these universities has its own promotional strategies to effectively deliver their message to the public in order to create awareness about the relative programme offered. Thus, this exploratory study attempts to examine the strength of biotechnology communication among pre-university students which consist of foundation in science, A-Levels as well as a Malaysian High School Certificate (STPM) in science stream by quantifying their awareness on a biotechnology programme as they are perceived as the next potential consumers of university that offers biotechnology programmes. Besides that, by evaluating the promotional efforts of higher education institutions could be instrumental in elevating students' interest in biotechnology which acts as the competitive advantage in increasing student number for the university which assures their sustainability in the market. It is believed that good promotional efforts will increase the awareness of the students. Therefore, the first chapter will cover the deliberation on the problem statement that links to the research questions and research objectives, hypothesis and assumption, the limitation and the significance of the study.

1.2 Study background

Malaysia is considered to be one of performing country in term of its Gross Domestic Products (GDP), whereby reaches up to the amount of 195 million US Dollar in the year 2008 (Mahaletchumy, 2011). Rich tropical rain forest enhances the wellness of Malaysia by being listed as one of the 12 mega

biodiversity countries in the world by the United Nations environment programme's World Conservation Monitoring Center (Ministry of Natural Resources and Environment, 2006). Thus, with this abundance of natural resources and biodiversity, it is definitely not surprising as Malaysia government viewing biotechnology sector as a crucial element to boost the country's economic growth to the next level. As stated by the Former Prime Minister of Malaysia, Datuk Seri Abdullah Ahmad Badawi, "Biotechnology has great potential in Malaysia and it could be a catalyst for new growth areas in the country's economy as well as a source of new wealth and income for the people." (Biotek Malaysia, 2004).

Biotechnology has been visualized that biotechnology will prosper quality of life, multiply abundant of wealth as well as income for both rural and urban populations. At the same time, it has the potential to elevate Malaysian's socioeconomic status as a whole (Natila, nd). In addition, cost-competitive skilled labour markets, well networked transportation systems as well as strong potential in R&D which solidifies the position of biotechnology rising factor of Malaysia's wealth. Therefore, in order to achieve this vision, the government has put in much effort to design effective as well as a robust supporting skeleton to aid the long term growth of this biotechnology sector and one of it was establishing the National Biotechnology Policy (NBP).

In April 2005, Datuk Seri Abdullah Ahmad Badawi launched NBP at the opening ceremony of BioMalaysia 2005 conferences in Putrajaya International Convention Center (NITC Malaysia, 2012), which were detailed with three efforts deemed critical to the creation of a sustained biotechnology sector. This policy has a series of detailed aggressive development goals. 2.5% of the national GDP is expected to be generated by 2010, followed by 4.0% in 2015, while the targeted digit of 5.0% in 2020. In other words, RM270 Billion worth of revenue is expected to be generated by 2020 (Frost & Sullivan^a, 2009). Ever since the launch of NBP, it was reported that the total investment that had been poured into biotechnology development was RM4.5 Billion in year 2009 and out of the 57.8% was by the Malaysian government, while the rest by private

companies as well as organizations (Prashanth, 2011). As mentioned before, this policy runs in three major phases but the most captivating for this research would be the first phrase which is 'Capacity building'. In this phrase, the policy emphasizes on the producing, educating as well as trained knowledge workers in biotechnology sectors (Natila, nd). Furthermore, it is said that this initiative will create 280,000 new job opportunities for this knowledge worker in the biotechnology industry to support the vision of the NBP. Thus, it is believed that education sector will aid the vision come to life by producing well equipped biotechnology students.

Besides that, to further polish the growth of biotechnology in Malaysia, the government announced 'The 9th Malaysia Plan' in 31st March 2006 (Frost & Sullivan^a, 2009). Whereby further refining the policy by strategizing nine thrusts and tentatively plans the adequate funding required to successfully support the development of the biotechnology sector in Malaysia under the NBP. Once again even under this newly tuned NBP, the government still finds 'Human Capital Development' as an essential tool to sustenance biotechnology sector. The government wishes to produce knowledge generation capabilities by special scheme, well design programs, educating and training, which are in line with the market or the industry needs. Not only that, it can be observed that relative eight other thrusts under the umbrella of NBP, does require adequate knowledge worker to make it happen. Thus, once again it could be said that education sectors will be able to generate the demanded knowledge workers required by biotechnology industry.

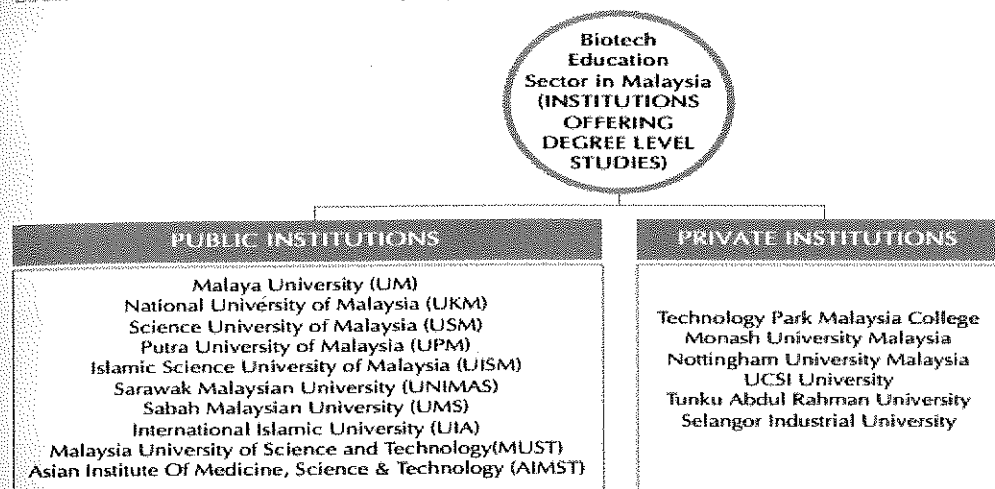
The Nine Thrusts of the National Biotechnology Policy	
Agricultural Biotechnology	Transform and enhance the value creation of the agricultural sector through biotechnology.
Healthcare Biotechnology	Capitalise on the country's biodiversity for commercialising the discoveries of health related natural products and bio-generic drugs.
Industrial Biotechnology	Leverage on the country's strong manufacturing sector to increase opportunities for bio-processing and bio-manufacturing.
Research & Development Technology Acquisition	Establish centres of biotechnology excellence, through research & development, as well as technology acquisition.
Human Capital Development	Build the nation's human capital through education, training and research activities, with the aim of producing knowledge generation capabilities.
Financial Infrastructure	Provide the right financial support via competitive lab to market funding and incentives to encourage committed participation from academia and the private sector, including Government-linked companies.
Legal & Regulatory Framework	Strengthen the legal and regulatory framework by reviewing ownership of intellectual properties and regulations relating to biotechnology processes and business.
Strategic Development	Build international recognition for Malaysian biotechnology and find a niche in the global technology value chain.
Government Support & Commitment	Realise the execution of policy through the establishment of a dedicated and professional Government agency to spearhead the development of the biotechnology industry with the incorporation of Malaysian Biotechnology Corporation Sdn Bhd (BiotechCorp).

Source: BiotechCorp, 2008

Figure 1: The nine thrusts of the National Biotechnology policy announced in 2006.

Within the context of Human Capital Development of biotechnology and life-science, the tertiary education sector serves as the fundamental source of production. Furthermore, the academia sector is the key body to impart the knowledge and skills required by the workforce in the country. In Malaysia, biotechnology education is provided by both public and private institutions. Public institutions are funded by the Malaysia government and a majority of them is called 'Research Universities' heavily participating in research and development as well as offering post graduate studies in biotechnology as they are able to tap into governmental research grants and funds (Frost & Sullivana^b, 2009).

Local educational institutions offering degree in Biotechnology



Source: Frost & Sullivan

Figure 2: Local educational institutions offering degree in biotechnology

Taking a few steps back and looking at the overall performance of Malaysian higher education that provided a biotechnology program at international level specialization. In 2008 stated that in Malaysia, University Science Malaysia was the highest ranked school at 123 amongst neighboring countries, followed by University Malaya (127th) and University Kebangsaan Malaysia (144th). Thus, this indicates that Malaysia is far behind other market players in terms of biotechnology sectors. It is critical for prompt improvements in the education system of biotechnology in Malaysia (Frost & Sullivan b, 2009). On the other hand, it is sad to say that none of Malaysian private universities were listed in the top 200, thus this raises concern about the private education institutions.