



**CASE
STUDY**

3

PHYTO BIZNET EXPANSION DILEMMA

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1. Introduction

One evening at the end of October 2014, Professor Ramlan Aziz (to be subsequently known as Prof. Ramlan), the managing director of Phyto Biznet Sdn. Bhd. (hereafter PBSB) found himself in a dilemma when thinking about PBSB's future expansion. Prof. Ramlan had been dreamt to expand the businesses to overseas markets. He thought there was no better time than the present to do so as the competition stiffened. Local market had been filled with imported and homegrown products and they were aggressively promoted. PBSB saw its profit squeezed and Prof. Ramlan felt the pinch. However, Prof. Ramlan new that expanding the business into overseas market would require a huge investment.

Since that day, Prof. Ramlan was also considering making a number of collaborations with other biotechnology companies, local or international, to market PBSB's products and later expanded its business internationally. Prof. Ramlan needed to determine the best way to expand his business. As the old saying says "opportunity only struck once", Prof. Ramlan had to carefully plot his actions. Small capital and owning a status of university spin-off firm posed challenge to Prof. Ramlan to dictate a next move for PBSB.

2. Malaysian Herbal Biotechnology Pharmaceutical Industry

Malaysia was known for its richness of agriculture, flora, fauna and herbs. There was a huge potential for discovering bio products as the Malaysian biotechnology industry was at early stage and had not been fully exploited. Using herbal products in drug discovery program and research also posed a great prospective.

Malaysia biodiversity and biological resources had given an opportunity to increase its economic vibrant, create jobs and improve welfare for its citizens. During the year 2005, Malaysia was ranked 12th in the world in terms of biodiversity with more than twelve thousand (12,000) species of plants used in biotechnology (Malaysia Opportunity, 2005). Due to its potential, biotechnology had been identified as a strategic thrust to speed up Malaysia's transformation into a high income nation by 2020. Effort had been made by the government to promote Malaysia as the strategic biotechnology centre in the region.

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To support the development of biotechnology industry generally, government had poured a significant funding for development of infrastructure, research programs, and human resource. For an example, in the Tenth Malaysia Plan, government allocated RM2.9 billion alone for biotechnology research and development programs (Economic Planning Unit, 2015). Such investment had made possible for research in genetic engineering molecules, and tissue culture. In case of herbal drug discovery and research, the Malaysian pharmaceutical market had been valued around RM 6.06 billion in 2012 (Jimmy Piong & Cheah Ming Loong, 2014). In addition, the local market value for prescription drugs was estimated at RM 4.39 billion.

Generally, local pharmaceutical companies produced common drugs for local and export consumption. The four broad categories of products that were manufactured included prescription drugs (RM 4.39 billion), over the counter drugs (RM 1.67), vitamins (including herbal) (RM 1.0 billion) and conventional drugs. According to Malaysia Ministry of Health (2012), there were 259 manufacturing companies that were approved by the health ministry. From the list, 182 were licensed conventional drugs manufacturers, 75 were licensed pharmaceutical firms and 3 were licensed veterinary-base products firms (Malaysian Investment Development Authority Report, 2013).

The Malaysia Organization of Pharmaceutical Industry (MOPI) represented several of the Malaysian key pharmaceutical manufacturers which consisted of thirty seven (37) members (Netxtreme Onesolution Sdn Bhd, 2015). On the whole, the group achieved a turnover of RM 484 million in exporting to more than 50 countries. Local key pharmaceutical manufacturers were Kotra Pharma (M) Sdn. Bhd., Hovid Berhad, Pharmaniaga Manufacturing Berhad, and Chemical Company of Malaysia Berhad (CCM) (Piong & Loong, 2014).

3. About the Entrepreneur

Prof. Ramlan was the founder and managing director of PBSB. He graduated in 1983 with a Master degree in Chemical Engineering from University of Manchester Institute of Science and Technology. After graduation, he joined University of Technology Malaysia (UTM) as a lecturer in February 1983. Shortly after that, he was appointed as the Head of Department at Faculty Chemical Engineering, UTM. Then in April 1987, he was appointed as the Deputy Dean of Faculty of Chemical and Natural Resources Engineering, UTM. At the end of December, 1998, he was promoted to the position of Deputy Dean of Research and Consultancy, UTM.

Prof. Ramlan was instrumental in developing UTM's first pilot plant that was intended for university's products and clinical testing. In 1992, when the university inked an agreement with German consulting firm, Energieconsulting Heidelberg, as technical advisor, Prof. Ramlan was appointed as the project manager to oversee the construction of the pilot plant. Recognizing the potential of bio products in Malaysian market, Prof. Ramlan successfully persuaded the university management to design the pilot plant for herbal/phytochemicals and bio products development, known as Chemical Engineering Pilot Plant (CEPP). The idea for building bio products testing plant came across in his mind while studying in Manchester, London. Since then, he dreamt to implement the idea in Malaysia.

In September 1994, Prof. Ramlan presented a proposal to Majlis Penyelidikan dan Kemajuan Sains Negara (MPKSN) for future technology development of natural resources. Consequently, in April 1995, the Economic Planning Unit (EPU) approved an allocation of RM 35 million for further



development of CEPP. In June 1998, CEPP was recognized as Centre of Excellent and Prof. Ramlan was appointed as the Director of CEPP.

Parallel to growing biotechnology industry, CEPP was upgraded to Institute Bioproducts Development (IBD) in January 2011. IBD then focused on producing products rather than chemical engineering. With working facility area of 100,000 square feet, IBD was used to conduct pilot scale research equipped with modular equipment and necessary technical supports such as process utilities, workshops, analytical equipment and resource centre. The innovation by IBD covered bio processing (fermentation, microbiology, and downstream processing and cell culture), herbal (extraction, purification and steam distillation) and Phyto chemical processing (metabolites profiling and safety and efficacy assessment). Such facility could support pilot plant stage, started from product research until product commercialization. IBD had acted as a bridge and became a linkage from the research process to the industry commercialization.

Started with Public Service Administration research grant, Prof. Ramlan had hired knowledge workers for developing bioproducts. In short time, several bio products were successfully produced but Prof. Ramlan knew that the products could not be commercialized without serious effort to market it. He again proposed to the university management for establishing a new entity to market university's bio products. The university management approved his idea and agreed to set up a spinoff firm to IBD, UTM.

4. The Birth of Phyto Biznet Sdn Bhd

Phyto Biznet Sdn. Bhd. (PBSB) was incorporated on April 30th, 2004 and located within IBD, UTM, Skudai, Johor, Malaysia (Phyto Biznet, 2013). PBSB's vision was to promote healthy living through wellness solution. The objective of the firm was to use herbs in health products. While IBD focused on bio products research and development, PBSB was focused to take on marketing aspect by bringing the bio products into the market.

Though the biotechnology business was underdeveloped when PBSB was first established, Prof. Ramlan believed that PBSB had competitive advantage. This was due to two reasons. First, he believed in richness of herbal plants grown in Malaysia that were not available in many foreign countries. Second, PBSB could leverage on the proven research and technology developed by UTM scientists. With high passion and enthusiasm, Prof. Ramlan started the operation with two other partners, Prof. Roji and Mr. Jaffrey. They received a grant of RM 30,000 from the university and provided with the facilities to continue their research. Prof. Ramlan also created online order on social media platform like Facebook for PBSB bio products to increase product visibility and ease of purchase.

In 2005, PBSB operation had extended. First, PBSB established Bakawali Spa. In its therapy services, Bakawali Spa used local herbs and medicinal plants. Bakawali Spa represented a wealth of knowledge, experience and skill of traditional Malay holistic wellness set in a charming, modern and comfortable 'Malay' inspired ambience. Second, PBSB was keen to improve its facility to achieve efficient technique for distillation handling. The improvement was essential as the local market value for herbal and medicinal plants were forecasted around RM4.55 billion in 2006.

PBSB had positioned itself as one-stop centre for contract manufacturing of natural raw material to its clients. Together with IBD, PBSB had offering courses in biotechnology, herbal processing,



holistic therapy, and wellness industry. PBSB also promoted bioprocessing method in the biomaterials production like biofuel and bio plastic. In promoting bio manufacturing, PBSB had been successfully set up good manufacturing practice (cGMP) facility in June 2006.

Backed by IBD's strength in manufacturing and processing, PBSB were then stood on developing opportunities in industrial biotechnology. These opportunities included the development of enzymes for food and feed preparations, cleaning goods, and other. PBSB also played critical role in assisting clients for producing premium components and efficient processing know-how for phytochemicals and nutraceuticals herbal, food ingredients, flavor and fragrance.

In year 2011, PBSB had been selected as one of anchor companies by the Ministry of Agriculture (MOA) for the development of NKEA Agriculture: Herbs Sub Sector for high value herbal products (Institute of Bioproduct Development, 2013). PBSB became the first and the only university-based firm that received the award. The award came with a grant of RM 9.8 million for pre-clinical test of cosmetic product. PBSB decided to use the grant for further clinical trials of its products, anti-ageing regenerating serum developed from *Labisia pumila* and whitening rejuvenating serum developed from *Ficus Deltoidea*, which slated for Asian and European markets (see Exhibit 1).

Prof. Ramlan needed to send the products to India for pre-clinical studies and clinical trials because there were no such set up in Malaysia. The studies were conducted to assess the efficacy of the cosmetic products on skin types across Asia, Mauritius and Europe. PBSB was the first local company to undergo pre-clinical and clinical trials on its products. These trials were conducted in accordance to the requirements stipulated by European Cosmetic Regulations, which were the strictest in the world. Prof. Ramlan estimated that the studies could enhance the value of the products and raise the standard of Malaysian bio products to a new level.

5. Expanding PBSB Businesses

At the end of October 2014, Prof. Ramlan felt that they needed an expansion plan as 2015 was approaching. The firm needed to act fast as many imitators were waiting to come in the lucrative health related markets. Soon the clinical tests of its two products would end and he needed a viable plan to market them. If the results were acceptable, Prof. Ramlan wanted the products to move quickly in the market and capture a sizable market share. He also wanted to expand the production in Germany to set foot in the European market.

6. Moving Forward

Prof. Ramlan felt that PBSB had come a long way. PBSB had achieved some of the important survival preconditions in the biotechnology industry that included high capital, knowledge, and manufacturing capability. Prof. Ramlan knew that, he had to focus in marketing area to drive the PBSB success in years to come.

Prof Ramlan also knew that there were still a lot of works to do. Sitting on his chair in the office, he was pondering what decision he had to make. Should he make collaboration with other biotechnology players or expand his business to international market directly in 2015? Which strategy would be the best to expand his business? What implications that he might face? He felt that he needed to act swiftly and make the right choice before he loses the opportunities.



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APPENDICES

Exhibit 1: Herbal Plants



Labisia Pumila (Kacip Fatimah)



Mas Cotek (*Ficus Deltoidea*)