

University-Industry Collaboration: Barriers to Commercialization

*Mohd Ghazali bin Maarof, Shahryar Sorooshian, Syed Radzi bin Rahamaddulla
Faculty of Industrial Management, Universiti Malaysia Pahang
Suhaila binti Abdul Hamid
Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia*

ABSTRACT

This paper identifies the potential barriers that can affect effective collaboration between industry and public university in Malaysia. Intense global competition has created new requirements to the industry: constant new technological breakthrough, rapid deployment of new technological solutions and shorter product life-cycle. Thus, both the industry and the university need to look into possibilities of sharing knowledge-based capital, technological facilities and access to new scientific development and innovation. Data for this study was obtained through interviews with top management of companies involved in providing training, agriculture and solar energy, fund management and manufacturing which have experience in doing collaboration with Malaysian public universities. Later, the data was analyzed using thematic analysis. Among the barriers identified were products are not market driven, bureaucracy, insufficient experience on applied research, lack of proper SOP, unattractive reward system, lack of information on potential collaboration opportunities and Intellectual Property (IP) issues.

KEYWORDS: *Collaboration, University-Industry, Barriers, Interviews, Globalization*

1. INTRODUCTION

Globalization has brought about new challenges to the industries worldwide. Globalization is the process by which international businesses become increasingly interconnected. International Monetary Fund (IMF) has identified four basic aspects of globalization: trade and transaction, capital and investment movement, migration and movement of people, and dissemination of knowledge (IMF, 2000). The intense requirement for constant technological advancement is one of the effect of globalization faced by the industries. As a result, firms are forced to come out with new technological breakthrough, rapid deployment of new technological solutions and shorter product life-cycle in order to stay competitive. To enable industries keep up with those challenges, firms have to look for talented workforce and get access to state of the art research infrastructure. Furthermore, intense competition among the market players and the pressure to reduce cost have caused many companies to exercise downsizing of its operation or even close down their R&D center (Lambert, 2003). These situation have led some companies to look for alternative solution such as to conduct research joint ventures with the universities (Halt et al, 2001).

As new technologies are becoming more complex, firms are facing difficulties to stand alone to manage the required resources and capabilities simultaneously in developing new technology and commercializing it (Woo, 2003). Universities are often regarded as a vital source for new knowledge. This is because university has the advantage to supply highly skilled graduates and researchers needed as well as to provide research infrastructure needed for the research works. Mansfield and Lee (1996) pointed out that the universities play an important role as a key contributor to wealth generation and economic development. The Triple Helix concept of university-industry-government relations has further strengthen the needs for universities to works together with the industry in the knowledge-based society (Leydesdorff and Meyer, 2006). A study done by Bramwell and Wolfe (2005) found that in the knowledge based economy, university plays an important role in creating innovative culture to the world. However, to make the collaboration effective, an efficient knowledge transfer between universities and industry are needed (Geuna and Muscio, 2009). According to José Guimón (2013) it is important to examine the experience faced by developed countries in order to understand what foster the motivation to form and the barriers to cooperate towards the university-industry collaboration. Furthermore Lawrence et al (2007) states that an effective collaboration can only be achieved when both parties, the universities and industries, possess synergistic goals to achieve the objectives. Therefore, this paper provides a study which identifies what are the barriers faced by the university-industry to conduct effective collaboration particularly in product commercialization.