The relationship between university and industry in the knowledge economy; A case study of Thailand’s automotive cluster

Abstract

This study examines the linkages and factors influencing relationships between universities and companies in Thailand’s automotive cluster and seeks applicable models and ways to improve the linkages among government, universities, national research institutions and firms in order to enhance innovation and competitiveness in the industry. Based on the ideas of the knowledge economy and a “triple helix model” of relationships among government-industry-university, this study uses multiple data collection methods, including questionnaires and in-depth interviews, with descriptive analysis to investigate the relationship among government, university and industry in Thailand’s automotive cluster in Samutprakarn province which emerged in 1990s to become a leading industrial sector of the country that the government has emphasized on.

Findings from this research show universities, as important players in the knowledge-based cluster, have three major schemes to serve the cluster, in collaboration with government, organization/institute and industry. Those are 1) to produce graduates highly relevant to the need of related sectors and 2) to conduct basic and applied research, and 3) to collaborate with organization/institute and industry to create new technology/innovations. However, there are challenges for any university to substantially support the cluster. These challenges are 1) universities do not produce highly qualified and industrially relevant graduates, 2) universities do not understand and accommodate the nature of industry, 3) universities do not have sufficient resources, 4) universities are not recognized as a critical player in economy, and 5) universities do not seriously cooperate among themselves and with other related sectors.

To deal with the challenges above and to enhance universities’ competitiveness/relevance in the automotive industry, my study recommends that universities could be improved by establishing a track record, culture and strategic plan to enhance trust and mutual recognition from the Thai automotive cluster. It is this trust and recognition that could lead to collaboration and eventually transform the automotive cluster into a knowledge-based and competitive cluster. In the longer-term, universities that adopt a mission to serve industry should be developed to become an effective component of the ‘triple helix’ or an entrepreneurial university by 1) committing themselves towards collaboration with industry and other players for mutual benefit and industrial growth, 2) understanding the demands and culture of industry, 3) developing niche technology and translating this into patents/licensing, 4) providing consultancy and collaborating with industry and government through an entrepreneurial spirit, 5) supporting business incubation services and spin-offs, 6) enhancing continuity of cooperative and entrepreneurship education, 7) recruiting and developing industrially-experienced and research-active staff, and 8) accommodating competitive facilities for R&D. In addition, a governmental intermediate organization (such as Thailand Automotive Institute) should be identified as the central organization in improving competitiveness of the cluster that should be given greater autonomy and flexibility to support the competition of different players with greater efficiency and effectiveness.