

# Enabling Academic Entrepreneurship in Malaysian Universities: An Organisational Perspective

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## Introduction

Universities in the 21st Century are faced with many challenges which brought about the need to change. These challenges and the need for change have been spurred by the changing role of universities in the society and the pressure to prepare students for a world of lifelong learning, of greater uncertainty and complexity, and greater probability of self employment. Universities are also pressured to play an enhanced role in contributing to international competitiveness of economies particularly via the process of research commercialisation and contribute more to local and regional economic and social development (Ali, 2004; Jain & Yusof, 2007).

Malaysian scientists and inventors have been capable and successful in winning various awards locally and internationally for their research and inventions. This demonstrates that Malaysia does not lack in innovation and production of new knowledge. Nonetheless, the issue seems to be that Malaysian universities have not been very successful in marketing, commercialising and transferring technology, research and inventions to industries (Berita Harian, 30 April 2007, pg. 11).

Instead of depending totally on the industry to spearhead these entrepreneurial initiatives and activities, universities' leadership and their stakeholders should confront this issue and conceretedly create an organisational mindset and internal work climate in the university environment and system conducive for the development of academic entrepreneurship. The main purpose of this article is to shed some light on how to enable academic entrepreneurship from an organisational perspective.

## The Higher Education Landscape

Malaysian universities are not excluded from the challenges and need for change faced by universities in other parts of the world. Ireland et al. (2006) posited that the pressure for entrepreneurial behaviour is triggered by developments in the external environment. In the Malaysian context, the driver has definitely been the Malaysian Government. Several initiatives had been undertaken to stimulate research excellence and further development of science and technology activities in Malaysian universities (MoHE, 2006). Recently, RM2.9 billion involving research grants have been allocated under the purview of the

Ministry of Science, Technology and Innovation (MOSTI) for the duration of the Ninth Malaysian Plan (Berita Harian, 30 April 2007, pp. 11).

In addition, the Ministry of Higher Education (MoHE) recently launched the National Higher Education Strategic Plan and the National Higher Education Action Plan 2007 - 2010 which have a specific thrust on enhancing research and innovation. Among the goals of this particular thrust include the development of six research universities, increasing the number of researchers, creating twenty internationally recognised centers of excellence, building a culture of innovation and commercialising 10 per cent of research products (The Star, 2 September 2007, pg. E9).

These plans are expected to transform the landscape of higher education in Malaysia. Yet, these events that offered propitious opportunities for Malaysian universities should not be limited to mere achievement of scientific reputation but should also be creatively extended towards the advancement of the academic entrepreneurial framework that results in economically valuable and beneficial innovation. Universities that separate teaching and research from innovation and entrepreneurialism leave untapped a vast resource that could be used for the betterment of their supporting communities (Vickers et al., 2001).

## Defining Academic Entrepreneurship

Based on content analysis and review of 146 published papers, Rothaermel et al. (2006) identified that there are four major research streams emerging in the area of academic entrepreneurship: (1) entrepreneurial research university, (2) productivity of technology transfer offices, (3) new firm creation, and (4) environmental context including networks of innovation. In investigating the phenomenon in the United Kingdom, Brennan et al. (2005) conceptualised the field of academic entrepreneurship as a confluence of three overlapped streams of research on technology-based firms, the commercialisation of academic discipline knowledge and the role of universities in society.

The organisational context of the university setting is central in the dynamic for entrepreneurship to take place and better addresses important relationships between academic entrepreneurs, host institutions and parent academic disciplines. Based on this perspective,

academic entrepreneurship is defined as encompassing the acts of organisational creation, renewal, or innovation that occur within or outside a higher education institution. Thus, an entrepreneurial university can be regarded as a university that extensively practises academic entrepreneurship. In other words, the academic entrepreneurship processes and activities are embedded in the university system, encultured in its academic faculties, embodied in its community of practice and embrained in each individual academic (Brennan et al., 2005; Brennan and McGowan, 2006).

## Organisational Transformation in Enabling Academic Entrepreneurship

Nurturing the academic entrepreneurial paradigm would certainly require a shift from a focus on (basic) research and teaching to the development of a collective, innovative, entrepreneurial and sustainable source of science and technology. Further, this calls for facilitation from inside the university system to accelerate technology diffusion (Rothaermel et al., 2006). In this respect, conflicts arising from periodic creative tension between teaching and research, applied and basic, entrepreneurial and scholastic interests are inevitable. For the academic entrepreneurial paradigm to be sustainable, compromised, normative change and reconciliation of different and seemingly opposed ideological elements such as entrepreneurship and the extension of knowledge need to be facilitated and embedded in the university system. In addition, academic and non-academic organisational elements must be integrated into a common framework (Etzkowitz, 2003).

Under these circumstances developing academic entrepreneurship in an existing university which has been governed in a bureaucratic manner into an administrative system that facilitates entrepreneurship, would require strong entrepreneurial leadership with managerial skills capable of overcoming various hierarchical and internal constraints, and conflicts (Jain & Yusof, 2007). From the organisational context, the main challenge to be faced by Malaysian universities wanting to nurture academic entrepreneurship is the ability to build an entrepreneurial mindset which pervades the entire university organisation and the internal work environment that supports academic entrepreneurship.

Ireland et al. (2006) posited that an entrepreneurial mindset represents a way of thinking about opportunities and commitments, decisions and actions necessary to pursue them, especially under conditions of uncertainty that commonly accompany environmental change and strategic adaptation. When adopting an entrepreneurial mindset, organisational actors increase their ability to sense opportunities and mobilise the resources required to exploit them. To develop this mindset, the leadership of the university has the responsibility to create a work environment that is

highly conducive to entrepreneurship, and when the appropriate conditions are in place, employees of all types will naturally unleash their entrepreneurial potentials.

Some quarters may worry that by becoming entrepreneurial, universities will lose their 'real' identity as an institution dedicated to the pursuit of knowledge for its own sake. In fact, some observers now begin to worry that combining research with scientific entrepreneurship or the structural coupling between "science and money" may have gone too far (Jain & Yusof, 2007). The issues arising from the negativity of academic capitalism can actually be managed and controlled by developing an academic entrepreneurship model that is grounded on ethical rationality. The ethical rationality should be founded on universal beliefs and values agreed by all stakeholders in guiding the direction of the university. Instead of the rational be based on profitability, productivity or speed, market share or control, let it be based on ethics-centeredness. With ethical rationality as the compass, the entrepreneurial activities, processes and end output would take into account not only economic costs but social costs and environmental costs as well (Nasruddin et al., 2006; Abdul Razak, 2007).

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The transformation in enabling academic entrepreneurship will also change the role of the university. An entrepreneurial university is a place where research is translated into economic goods i.e. "the capitalisation of knowledge". As universities engage in economic activities, they "shift their institutional role from purely eleemosynary to partial self-generation" (Etzkowitz, 2003). When the university is capable of generating revenue from the capitalisation of knowledge, there is an additional revenue stream other than tuition fees payable by students and it becomes less dependent on government support. By becoming more independent, the university has the ability to turn strategic entrepreneurship into sustainable entrepreneurship, as the engine and source of sustainable competitive

advantage at the national and regional levels. This demonstrates the expansion of academic entrepreneurship from an organisational growth regime into a regional economic and social development strategy (Jain & Yusof, 2007).

A case in example was the transformation that took place at Stanford University, USA. The transformation included the organisation of group research; the creation of a research base with commercial potential; the development of organisational mechanisms to move commercialisable research across institutional borders and finally the integration of academic and non-academic organisational elements in a common framework. The first two elements are within the framework of the research university; the next two are part of the transition from the research to entrepreneurial academic models; the last element is a feature of the entrepreneurial university (Etzkowitz, 2003). This demonstrates that academic entrepreneurship emerges from collective efforts.

## Conclusion

The nature of the university evolves through time. Traditionally, universities have been viewed as the "high protecting power of all knowledge and science, of fact and principle, of inquiry and discovery, of experiment and speculation" (Klofsten & Jones-Evans, 2000). The industrial revolution in Europe and the conception of the modern university in the 19th Century had in fact changed the nature of the university as the liberator and protector of knowledge to producer of industry-ready workers. This was recently referred by the Vice-Chancellor of Universiti Sains Malaysia, Professor Dato' Dzulkifli Abdul Razak, as the "assembly-line education". In this century, universities are required to evolve again and be important engines of sustainable technological development and economic growth (Klofsten & Jones-Evans, 2000; Abdul Razak, 2007).

Enabling academic entrepreneurship requires a strong conviction especially on the part of the university leadership and essentially on the part of its stakeholders. Creation of an organisational climate in a university environment conducive for the development of an academic entrepreneurship strategy is a complex task that requires the efforts of many committed individuals. These individuals are located in the industry, academe and government and often lack the coordination in their activities. Thus, a concerted effort needs to be organised and through proactive measures and organisational renewal, academics, researchers and scientists should be motivated and encouraged to maximise the potential of commercialising their ideas and create value in society.

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