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Answer in commercial partnerships

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COMMERCIALISATION is the buzzword. Ready or not, this is the direction local public institutions of higher learning should be heading with regard to their research efforts.

Currently, public universities have a substantial research and development output which can be commercially viable. But securing the assistance of the private sector for funding and expertise to turn research results into products is still a problem.

Universiti Kebangsaan Malaysia (UKM), for example, has only managed to market between five and 10 per cent of their research enterprises.

Professor Dr Muhammad Yahaya, director of the Research Management Centre at UKM, says the university has churned out semi-finished products which are commercially viable and are waiting to be developed by private companies.

Industry's reluctance to form partnerships with public universities in this arena is based on the fear that these ventures may not be profitable.

That puts the onus of convincing industry otherwise firmly on the public universities.

A few years ago, Prime Minister Datuk Seri Dr Mahathir Mohamad urged public universities to highlight their research findings in a national-level promotional campaign.

Fifteen public universities took up the challenge recently, showcasing their best works at the "Public Universities Research and Development exhibition" at Putra World Trade Centre. (see sidebar)

The issue of commercialisation of research findings by public universities has been widely debated by academic think tanks and economic pundits for years. It has taken on an urgency, given Malaysia's commitment to the knowledge-based economy.

At last month's national seminar on "Human Resource Development in the K-economy", Professor Sharifah Hapsah Shahabudin, director of the Centre for Academic Advancement at UKM, says public universities are important sources of value creation and they should have a role in industrialising knowledge.

"From R&D in various areas, to design and development of products and services and the education of highly technical and professional workers, the university is well poised to take its place in the K-economy," writes Dr Sharifah Hapsah in her paper Human Resource Development for the K-Economy: Role of Public Institutions of Higher Learning.

The good news is, the Government is showing greater interest in R&D. Policies are made and changed to facilitate and expedite the commercialisation process. Universities too have been repeatedly urged to strive as research universities.

The move began with the formation of the Intensification of Research in Priority Areas (IRPA) funding programme in 1993.

IRPA underpins research and development activities in the public sector particularly in areas which address the needs of Malaysian industry.

And, under the Eighth Malaysian Plan, the Government has allotted a budget of RM900 million for IRPA programmes.

Zam Abdul Karim, deputy director of Science and Technology Department (Research), says mechanism changes in IRPA have resulted in more focused research areas.

The 11 categories of research grants disbursed during the Seventh

Malaysian Plan were reduced to three specific areas: Individual Projects grant, Prioritised Research grant and Strategic Research grant.

Says Zam: "Individual projects must be experimental or applied in nature with the potential to be developed commercially.

"Prioritised Research grants apply to projects which took off during the Sixth and Seventh Malaysian Plan and are still in progress. These studies have produced definite results but require more funding to be further developed," she adds.

On the other hand, "Strategic Research grants focus on new or future technology in areas such as photonics, biotechnology and software designing," says Zam.

Again, the research must be commercially viable and jointly conducted by researchers from three institutions of multi-disciplines.

Response to the new requirements has been positive. Many of the public universities have jumped on the bandwagon and have formed partnerships with industry, enlisting a cadre of multi-disciplined researchers.

Professor Halimahtun M. Khalid, director of the Institute of Design and Ergonomics Application at Universiti Malaysia Sarawak (Unimas), says multi-disciplinary collaboration is a normal practice in the university ever since its inception in 1993.

"We believe in working collaboratively. In any research project, we view the problems from all angles," she adds.

The private sector is warming up to the idea as well. At the recently held exhibition, 28 private companies signed memorandum of understandings (MOU) and memorandum of agreements (MOA) with selected universities for technology transfer and for commercialisation.

That signals an auspicious beginning for commercialisation of research findings. Still, more private companies should follow the lead as the companies which have come forward are still outnumbered by those which have not.

"Many private companies are still not keen on forming commercial partnerships with public universities," says Muhammad.

To add insult to injury, the private companies are competing with the universities for government funding.

"That should not be the case. They (the industry) should be the ones to help us and not be dependent on Government grants," he adds.

And although the universities have benefited greatly from IRPA grants, a number of them agree that much improvement is needed of the government body.

A major gripe is the slow disbursement of funds by IRPA during the period between the end of one five-year plan and the beginning of another.

Professor Ramli Mohamed from the School of Communication at Universiti Sains Malaysia (USM) says sustainable funding is crucial for the universities.

"We depend heavily on the grants. So when the grant disbursement is disrupted it will throw our plans into disarray," he says.

Many universities too lament the strict conditions imposed by IRPA during the project evaluation stage.

Many research groups worked hard to produce proposals for presentation to IRPAs panels only to be rejected ungraciously. Often, dejected team members refuse to reapply.

The perception is, IRPA is the "bad guy".

IRPA is aware of its bad rapport with the universities and "it is painful to us", concedes Zam.

"IRPA was set up to help public universities nurture the proper R&D culture and I feel that we have succeeded in doing that," she says.

She notes that public universities have gone from strength to strength

in this initiative.

"Some 15 years ago, research duplication was rampant among the universities," she says.

"Today, not only have the universities unearthed ground-breaking projects, they have also moved closer towards commercialisation by developing their own research management centres, monitoring units and even companies which oversee the entire process," adds Zam, alluding to companies such as USAINS Holdings formed by USM.

She views the stringent measures imposed by IRPA as "the necessary evil" to keep the universities on track and be committed to their goals.

Professor Dr Ridzwan Abdul Rahman, director of the Borneo Marine Research Institute at Universiti Malaysia Sabah (UMS), shares Zam's sentiment.

"Indirectly, IRPA is training the universities to be competitive and focused in their research projects. Only the best and viable ideas will secure funding," he says.

Ultimately, commercialisation will provide researchers with the opportunity to sell their expertise, which is in line with the aims of the K-economy, says Zam.

The public universities show great desire to meet the ideals and standards of a research-based university. So far, they have shown great potential and are progressing more rapidly than anticipated.

Yet, with limited resources and funding, the research teams can only go so far.