

## Effectiveness of research and innovation management at policy and institutional levels in Malaysia

As a nation with relatively limited resources, Malaysia has to ensure that every investment it makes in research and innovation (R&I) achieves the desired results and earns a high rate of return. The allocation of resources is therefore closely aligned to its national priorities of transforming the country into a knowledge-driven economy to maximise economic and social returns. R&I is a key activity in enhancing the generation of new products, processes, services, or solutions. Despite making progress, Malaysia has a long way to go to catch up with its competitors. The Ministry of Science, Technology and Innovation identified the following challenges to be addressed systematically and urgently:

- Public sector orientation and national focus
- Sound institutional framework but weak management
- Limited linkages and collaboration
- Weak dissemination and weak attention to absorptive capacities
- Lack of focus
- Concern over the effectiveness of educational investment and brain drain.

### Intervention

Following identification of challenges, national policies, strategies and mechanisms were put in place to address them. These included the following:

- **Setting research priorities** – Research priorities to focus on those areas where the nation is already strong and where opportunities for growth and leadership are highest.
- **Striking a balance in funding support** – The emphasis of R&I funding in Malaysia has been on applied research. There should be a balance in funding all aspects of the research spectrum.
- **Improving funding mechanisms** – Over the years, Malaysia has introduced a wide range of research funding schemes for both the public and private sectors resulting in inefficiencies such as difficulty in identifying suitable funds, long bureaucratic delays in approval and disbursement of funds, and lack of rigour and transparency in fund approval. To address some of these concerns, the government plans to set up a central mechanism to manage all major R&I funding schemes.
- The government is encouraging the private sector to play a more active part in research and innovation: Initiatives include tax incentives to encourage the private sector to carry out R&I as well as loans and venture capital.
- Utilise public universities, which have research management units within their administrative structure: Staff members from these units should meet annually to share experiences and co-ordinate matters pertaining to research procedures in each of their universities. These feed into general guidelines and uniform administrative policies that apply to all researchers in public universities.
- Malaysia's national innovation strategy has three thrusts: a) to strengthen the building blocks of innovation, b) to switch on the enablers, and c) to shoot for the stars. The building blocks include school leavers, graduates, a workforce with the right attitude and skills, intellectual capital for wealth creation, and a seamless funding pipeline. The enablers include the use of ICT technologies, lifelong learning, interaction and

collaboration between industry, academia, society and government, and the creation of entrepreneurs. “Shoot for the stars” involves developing world-class centres of excellence (COE)

## Results

Malaysia has made impressive strides in developing the management of R&I; however, funding continues to remain low compared with amounts invested in developed economies. Most research funding currently comes from the public sector. The private sector is, however, is encouraged to play a more active role. Much of the research funding is allocated to applied research, focused on developing new products, processes, services and solutions.

Government granting agencies are being expected to fund projects in areas of high national priority, in which commercialisation is possible. These projects are also expected to encourage collaborative effort across research institutes and enhance R&D linkages between the public and private sectors.

Most public research funds are allocated as block grants, such as the research funds transferred to research universities. A more competitive grant scheme would instil transparency and accountability in fund allocation, as well as ensure quality research aligned with national research priorities.

Policymakers should continue to review the national priorities for R&D, to restructure organisational and governance arrangements for R&D considering national priorities, to refine their research-funding mechanisms, and to appreciate both the opportunities and the threats to nationally significant R&I activity. Institutional leaders should ensure that they are properly acquainted with research trends, policy settings and funding settings to be better able to plan strategically and develop the necessary executive and other institutional support mechanisms to progress valuable R&I activities.

## Learning for India

- A stronger focus on innovation in service delivery is required.
- Competitive grant schemes can increase transparency and accountability.
- Research needs to be aligned with national priorities.
- Active collaboration between research institutes, government bodies and incentivising research for the private sector can reap benefits.
- A strategy to effectively collaborate with public universities and institutions should be developed.

*Adapted from OECD's Effectiveness of Research and Innovation Management at Policy and Institutional Levels in Cambodia, Malaysia, Thailand and Vietnam.*