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Staying competitive by using R&D to increase productivity

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FOR the Malaysian scientific community, among the many parting gestures attributed to Tun Dr Mahathir Mohamad, his suggestion to boost national research and development (R&D), is perhaps the most exciting.

Indeed, his 2004 Budget presentation won the hearts of many scientists and researchers when he proposed that the rules and regulations governing universities and the use of government funds for R&D ought to be relaxed (NST, Sept 6).

This will not only give researchers more autonomy to work creatively and independently, but it can also assist in promoting the economic and social growth of the country.

After all, appropriate R&D can produce relevant technology that could spur productivity and ultimately improve quality of life. This is especially so if at the same time university-industry-community co-operation is facilitated.

Indeed, the former Prime Minister was right when he said: "If researchers are given the freedom to work independently, results (of research) will be more relevant and applicable in business. He prompted: "We need to adjust our thinking and, if necessary, relax a little bit our rules and regulations governing the universities as well as the use of government funds for R&D."

As it is today, his impression is that universities tend to be more academic in research and sometimes this means the results of R&D are not benefiting the industry, or even the community.

In part, this could be due to the lack of synergy between the universities and industries and community at large. For the industry, this has more to do with the commercialisation of viable R&D projects which at this stage is rather dismal.

For example, according to data presented by Dr Hii Hnn Hui of the Ministry of Science, Technology and the Environment (MOSTE) at the National Symposium of Science and Technology in July, only a small portion of R&D in Malaysia gets commercialised. Out of 5,232 projects implemented during the 10-year period spanning the Sixth and Seventh Malaysia Plans, only five per cent (barely 262 projects) were commercialised. This is despite the fact that the number of potential projects that could be commercialised is almost three-fold (14 per cent).

Why this is so is by no means a clear cut issue, although universities tend to be blamed for not conducting research which is relevant to the industry. The academia cites the lack of support from the industry as one of the main reasons. This sentiment is echoed by the Education Minister during his speech at the Public Institutions of Higher Learning (IPTA) Research and Development Exposition 2003 (NST, Oct 10). In fact, he called the private sector to collaborate with public universities in R&D projects through funding and sharing of expertise.

To date, in both instances, the private sector participation is still at an infancy level compared to the more industrialised nations.

However, this does not happen "naturally" without some form of "push" from the Government. In a recent report prepared on behalf of the Organisation for Economic Co-operation and Development (OECD) governments, this point is well-underscored when "it is generally agreed that governments have a role in encouraging appropriate R&D levels and expenditures."

To do this, many OECD countries are adopting a number of options ranging from tax incentives, subsidies, to patents rights and other instruments to increase research investments. Depending on the national factors, it has been shown that the appropriate options can increase private research funding.

In this respect Malaysia is still lagging far behind. The present government R&D expenditure is only 0.5 per cent of gross domestic product (GDP), and going by the Knowledge-based Economy Masterplan the figure is even lower at 0.39 per cent.

It is therefore, encouraging to note that the Government is aiming to increase R&D spending in the field of Science and Technology (S&T) to at least 1.5 per cent of the GDP by 2010.

On top of this, the recent budget proposal to implement tax exemption of 50 per cent for five years for income received by researchers from commercialisation is an added bonus, albeit a beginning. So too is the proposal not to charge on patents registered by local researchers.

Already an extra RM183.6 million is to be allocated for the IRPA (Intensification of Research in Priority Areas) programme that targets university R&D. All these will definitely assist to boost national R&D capability as soon as the mechanisms for their effective implementation are worked out. This is indeed urgent for Malaysia to remain competitive by using R&D to increase the level of productivity. Empirical analysis, according to the experiences of OECD, affirms that R&D increases multi-factor productivity.

Thus, as we welcome Malaysia's fifth Prime Minister to office this week, we remain confident that the nation's S&T and R&D policies will be one of his top priorities in taking Malaysia into greater heights.

This column would like to take this opportunity to wish Datuk Seri Abdullah Ahmad Badawi the very best in navigating Malaysia through the challenges of the future.