

## EDITORIAL

### Impact of the national economic crisis on research in Sri Lanka

#### Introduction

Sri Lanka's economic crisis has resulted in great hardship for the people and the greatest challenge to the government. The country is at present, experiencing an economic crisis, with high inflation and a severe scarcity of funding. The current financial crisis has led to sharp cuts in funding for scientific research by governments and charitable organizations, hiring freezes across university departments and academic institutes, and downsizing and restructuring the research and development of sciences. It is yet to see a sign of some light at the end of the tunnel whilst, the Sri Lankan economy remains fragile, and the future of science funding remains at a risk.

#### Global trends of expenditure on research and development

First, it is interesting to see the overall global picture of expenditure trends on research and development over the past years verse that of the current years of economic crisis. According to the global financial data on research and development expenditure, in 2002, the European Union set a target of 3% of its gross domestic product (GDP) for research and development by 2010. Even without an economic turmoil, the progression was marginal. For example, in 2008, the expenditure in the European Union was only 1.92% of the GDP, significantly lower than in the USA (2.79%) and Japan (3.45%). Having

failed to reach the 3% gross domestic product spending target for research and development in 2010, the European Union reset the same objective for 2020. Unfortunately, due to the existing economic recession, the possibility of achieving the reseted target in 2020 seems to be further threatened. Despite increased investments, in recent years, the science spending almost frozen in Europe with the current global economic crisis. In 2021 and 2022, Circumstances have been progressively worsening in Europe, where several countries are in dire financial status and have proposed almost 25% reduction in research and development expenditure.

Furthermore, the financial downfall has also had a detrimental impact on non-governmental funding. For instance, cancer Research UK, one of the largest charities in the UK, recently had a 10% drop in research funding over the next three years. More recently, the funds on treatment and prevention AIDS, Tuberculosis, and Malaria have been reduced. Therefore, the global forecast is not promising at present.

#### Sri Lankan trend in expenditure on research and development

Sri Lanka faces an unsustainable debt and a severe balance of payments crisis, negatively impacting growth and poverty. According to the latest South Asia Economic Focus and the Sri Lanka Development Update, Sri Lanka's

real GDP is expected to fall by 9.2 per cent in 2022 and a further 4.2 per cent in 2023.

Domestic expenditures on research and development are expressed as a per cent of GDP. They include capital and current spending in the four main sectors, Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development. A country's research capacity could be measured on the allocation of funds of gross domestic product spent on research, the number of researchers, publications in refereed journals and patents.

It is estimated that Sri Lanka allocated 0.11 per cent of its Gross Domestic Product (GDP) for research in 2013, whereas the world average is 2.23 percent. Sri Lankan research and development expenditure data is updated yearly, averaging 0.144 % from Dec 1996 to 2013. The data inclined the highest of 0.184 % in 1996 and the lowest of 0.11 % in 2013. According to the World Bank collection of development indicators, research and development expenditure in Sri Lanka was reported at 0.12836 % in 2018. In light of the above trends, even in the absence of severe economic crisis the national science funding was at a risk

Furthermore, the local situation is exceptionally fragile by looking into the overall global in the context of global economic crisis. The current situation in Sri Lanka is contending with strict measures. With the global recession persisting, the government faces a horrendous choices of monetary allocation for research and development. The

real impact from 2021 and onwards yet to see with the upcoming data and for surely it will not be promising.

### **Consequences of struggle in expenditure in research and development in Sri Lanka**

Potential repercussions of cut-down research expenditure can have detrimental long-term consequences. For example, reduced job opportunities due to hiring freezes and downsizing in academia and this could result in scientists emigrating, with the danger of a 'brain-drain'. Decreased research resources could limit scientific vision and opportunities for collaborative research which is a crucial fact of modern multidisciplinary research. The dearth of funding also drags and redirects the priorities towards more readily applicable projects to achieve more immediate returns over the long term projects. Policies favouring practical applicability over fundamental discovery threaten to reduce funding available for basic research, and it is essential to seriously look in to this matter since the outcome of basic science can never be fully predicted but it may have unexpected, lasting effects in the future.

### **Suggestions for the future**

In times of economic crisis, it is essential to remember that research is a marathon, not a sprint. Investing in research is investing in the future. The expenditure on R & D needs to be sustained in order to have a long-term commitment to accumulating knowledge,

testing basic principles, and extrapolating the findings into applications that impact on day to day life. Safeguarding the future of scientific R & D will require wise decisions and long-term vision by policymakers.

Sri Lanka is well known for its high literacy rate, and it may be an added asset in going for a much richer research culture in the future. Globally recognized achievements of Sri Lankan research can be heard from many parts of the world. Those are related to diverse fields. Sri Lanka inherits a research culture that triggers from the undergraduate level and continues with their subsequent higher academic levels. Despite all the hardships we face currently, as a country, it is our task to make serious efforts to take this research in strength to strength and the discoveries to the world. I strongly feel that, the substantial and prominent role of today's researchers will inspire future generations of researchers of the country.

By

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