

## READER SUBMISSION

# AT THE INTERSECTION OF ECONOMICS AND MATHEMATICS

FAYAADH SALEHIN AHMED

As an A level Economics students, we often indulge ourselves in the realm of Keynesian theories – from the General Theory of Employment, Interest and Money to concepts such as multiplier effects and liquidity preference. John Maynard Keynes has shaped our lens of economic thinking, considering the fact that the field of macroeconomics simply did not exist before him. Yet, here is a surprising detail: Keynes himself was not formally trained as an economist. At Cambridge, he studied Mathematics, and it was Alfred Marshall, one of the leading economists of his era, who implored him to devote his mathematical faculties to Economics.

In fact, the realm of Mathematics and Economics is intertwined. Let's consider Game Theory for a second. John Nash, an American mathematician studying Governing Dynamics at Princeton University, challenged Adam Smith's principle of the "invisible hand". In a moment of eureka, he exclaimed, "Adam Smith needs revision."

Nash's work proved that, in reality, individual ambition does not inherently serve the common good, and that it is cooperation between individuals that benefits both themselves and the group — also known as the Nash Equilibrium.

These narratives indeed revolve around the same notion: for centuries, Mathematics has been the cornerstone of some of the most pivotal developments in economic thought. This is exactly where econometrics enters the scene. Econometrics is a subject that blends Mathematics, Statistics, and Economics to transform abstract theories into measurable insights.



ILLUSTRATION: ABIR HOSSAIN

Students who study A level Further Mathematics spend time tackling foundational statistical concepts such as continuous random variables, inference using normal and t-distributions, chi-squared test, and nonparametric tests. While these topics often look highly technical on paper, econometrics paves the way for students to reflect upon using these tools from a more practical approach.

For instance, we can make inferences using normal and t-distributions. Let's assume an economist wants to know whether or not education truly raises average income.

Using a sample of data, they can build a regression model and apply t-tests to check whether a positive correlation between education and income is statistically significant or just a stroke of luck. Likewise, normal distributions are also often used to model random shocks in the economy, such as fluctuations in the stock market or demand for a product. In both scenarios, Mathematics serves a greater purpose. It's no longer constrained to a theoretical exercise, but also allows economists to draw empirical conclusions.

*The author is an A level student at Scholastica.*

## NOTICE BOARD



## UAP signs EOI with Universiti Teknologi MARA, Malaysia

An Expression of Interest (EOI) was signed on September 25 between the University of Asia Pacific (UAP) and the Accounting Research Institute (ARI) of Universiti Teknologi MARA (UiTM), Malaysia. Prof. Dr M A Baqui Khalily, Dean, School of Business, UAP, and Prof. Dr Zuraidah Mohammad Sanusi, Director, ARI, UiTM, signed the EOI.

This marks the first step towards a partnership between UAP and ARI to foster academic excellence, joint research initiatives, and the development of dual or twinning programmes. The areas of potential collaboration include, but are not limited to, joint research projects and publications, development of joint academic programmes or workshops, and the sharing of resources, expertise, and best practices.

## IUBAT holds initiation programme for Fall 2025

The International University of Business Agriculture and Technology (IUBAT) welcomed its fresh batch of students for Fall 2025 through an initiation programme held on October 5. The programme was designed to familiarise the newcomers with IUBAT's education system, services, and facilities to ensure a smooth and enriching academic journey.

Dr Md Shohidullah Miah, Professor, College of Agricultural Sciences, delivered the initiation speech. The event was graced by the presence of Dr Mohammad Kaykobad, Distinguished Professor of the Department of Computer Science and Engineering at BRAC University, who attended as the Chief Guest. In addition, visiting faculty from Canada, Taylor Ewerth, delivered a special



speech to encourage students on their new academic journey.

In his presidential address, Vice-Chancellor Prof. Dr Abdur Rab emphasised IUBAT's commitment to preparing students for success in both life and career. He advised the new entrants to embrace the challenges of quality higher education with dedication and perseverance.

## PRESIDENCY UNIVERSITY SIGNS MOU WITH CURTIN UNIVERSITY



Presidency University has signed a Memorandum of Understanding (MoU) with Australia's Curtin University to establish a long-term partnership in higher education and research. The signing took place at Curtin's Malaysia campus, paving the way for international academic collaboration and global student opportunities. Through this agreement, Presidency University students, after completing their honours degree, will gain access to postgraduate opportunities at master's and PhD levels.

The MoU was signed by Prof. Dr Vincent Lee, President and Chief Executive of Curtin University Malaysia, and Prof. Dr Md Anwarul Kabir, Principal Adviser to the Board of Trustees, who was present virtually.