Economists put the `Science' in Social Science

Before we consider the question of why a young person should consider devoting years of his or her life to the study of economics, it is important first to establish what we mean by economics. A conventional view is that economics is the (a) study of markets, where people buy and sell things, usually in exchange for currency; (b) of banks and financial institutions; and (c) of how countries differ in material wealth and national income. All of this is certainly valid indeed, it characterises the majority of the undergraduate and postgraduate curricula at City University London and other good universities. There is, however, a more expansive, indeed some would say imperialist, perspective, which holds that the analysis of nearly any social interaction, whether between workers and managers in a factory, between members of the same family, between voters and politicians, or between leaders of different states, can benefit from applying the tools developed by economists. In this view, economics is not restricted to a particular set of topics, but represents an approach to understanding all manner of social behaviour. What characterises its approach is the explicit formulation of initial assumptions, followed by the application of deductive reasoning and logic and then quantitative measurement. This process is part of what makes economics so compelling---we economists `put the science' in social science in a way that few other disciplines do. A good economics education should not only teach you how markets work, but should train you to think analytically about the world around you in a consistent and logical manner. Consider how much the public discourse you encounter on important topics is based on a variety of different logical fallacies. There is the proposal to give every adult in the United States one million dollars, and by doing so make everyone rich. This is the fallacy of composition, whereby people assume that what holds true for an individual in a group must hold true for the entire group (this also relates to the commonly-held `money is wealth' fallacy). Alternatively, the contention that as long as per-capita income is growing, everyone must be enjoying higher standards of living because `a rising tide lifts all boats' represents a fallacy of division---the faulty assumption that what holds for the group must hold for each of its individuals. Post-hoc fallacies assume that if one event happened before another, the first event must have caused the second. So if, for example, World War II followed the Great Depression, people conclude that it was the Great Depression that must have caused World War II. Similarly, the prediction that another world war must follow any future depression, is an example of an other conditions fallacy. Economics, which is founded on the building and analysis of models with clearly stated assumptions, is a great remedy against this sort of confusion.

Indeed, it is often worse. Consider how often since the last financial crisis politicians, business leaders or journalists have (1) expressed the view that central banks need to lower the cost of borrowing to encourage businesses to invest (lower interest rates) while simultaneously ensuring that individuals' savings and thrift are adequately rewarded (raise interest rates), or (2) urged private banks to behave more prudently than in the past (lend less money) yet also help struggling households and businesses in order to help grow the economy (lend more money). Such confusion is the inevitable result when people try to analyse complicated questions without reference to an explicit model designed to explain how the world works.

Economic models are useful for other reasons. Beyond telling us how seemingly disparate and complicated phenomena might be related, they also give us the tools to quantify these relationships. Take as an example the results of my own research on the macroeconomic effects of immigration (Ben-Gad (2008)). What I find is that increasing the number of immigrants has very different effects on the wages of native workers depending on whether they themselves are well educated or not. Considered together, and adding in the effects immigrants have on people who own their own businesses or derive income from investment portfolios, the overall effect of immigration is positive for the average native. How educated the immigrants are themselves matters a lot---the more immigrants who arrive with a university education, the greater the overall benefit to the society that absorbs them. Moreover, by

using a model designed around the US economy, I am able to predict roughly how much different types of immigrants are likely to change wages and the return on investment over time. Because of the way the economy adjusts as the new immigrants arrive, the overall impact of immigration, in terms of both its positive and negative good effects, is much smaller than most people imagine or the way these issues are usually discussed in the media. To offer another example, increases in tax rates rarely generate as much additional revenue as politicians of the left usually promise, or harm long-term economic growth to the degree their counterparts on the right predict. The reason is that, again, investment and capital adjust in ways that are hard to understand unless viewed through the prism of economic models. Economists build tools not only to understand today, and to forecast the future, but also to interpret the past. As the Nobel Laureate Robert E. Lucas, Jr., recalled in 1998:

I was getting more interested in economics and economic history as a history student. The work of Henri Pirenne, the Belgian historian, who stressed economic forces influenced me. When I was at Berkeley I started taking some economic history classes and even attended an economics course. That is when I first learned what a technical field economics is and how impossible it would be to pick it up as an amateur. I decided then that I wanted to switch to economics.

It is important to emphasise Lucas' point: economics is a technical field, and to understand it properly usually requires formal training. A good undergraduate course should include a strong core of microeconomics that includes the study of the behaviour of firms and consumers, as well as some basic understanding of strategic behaviour (game theory). It should teach you macroeconomics with an emphasis on constructing models that explain national economies by carefully aggregating the individual behaviour of firms and consumers, then adding the actions of central banks and governments. There needs to be a strong emphasis on econometrics, the statistical analysis and testing of models. There needs to be a good grounding in mathematics and statistics as well. Finally, I think a modern economics education is not complete without some training in modern finance, especially modern portfolio theory. Because of our proximity and strong relationship with the `City' (the City of London is the financial district at the heart of metropolitan London from which City University London derives its name), our Department of Economics places a strong emphasis on the field of Financial Economics in both our research and teaching.

There are lots of interesting things to study at university. Some courses are largely vocational---they are meant to prepare you to do specific jobs in business, law or medicine. By contrast, most people who study courses devoted to ancient civilisations, art history, astrophysics, French literature, philosophy or zoology do so because they are fascinated by these subjects and not because they expect they will necessarily be able to build professional careers around them. What about economics? The honest answer is that economics sits somewhere between these two extremes. On one hand, economics is typically more an academic, rather than an explicitly professional degree. particularly at the undergraduate level. On the other hand, we are rather proud of the fact that employers, in both the private and public sectors, want to hire people with economics degrees because they value the skills, knowledge and training our students receive in our programmes.

In our department we place great emphasis on ensuring that students not only are well versed in economic theory, but also have the quantitative tools and grounding in finance that employers expect from City graduates. Our department is a partner in two major EU-financed research projects that reflect our strength in Financial Economics: Forecasting Crisis (FOC) and CRISIS, Complexity Research Initiative for Systemic Instabilities. Beyond Financial Economics, the department has traditionally been a leader in the UK in the fields of Health Economics and Competition and Regulation, and maintains two research centres; the City Health Economics Centre (CHEC) and the Centre for Competition and Regulatory Policy (CCRP), which foster strong links with practitioners throughout the UK. Beyond that

we have invested heavily in the last few years in building capacity in Behavioural Economics and in Macroeconomics---we now have four active researchers in the field of Macroeconomics and another in the related field of International Finance.
Every year we welcome about 150 undergraduate students, about half of them from outside the UK. We offer BSc programmes in Economics, Financial Economics and Economics and Accountancy. Another 150 students join our various postgraduate programmes, more than three quarters of them from abroad. We offer MSc programmes in Business Economics, Development Economics, Economics, Economic Regulation and Competition, Economic Evaluation in Healthcare, Financial Economics, and Health Economics. We are also planning to offer a new MSc in Behavioural and Experimental Economics very soon. The PhD programme now includes a taught component with bespoke modules in Microeconomics, Macroeconomics, Econometrics and Finance that are designed specifically for research students who have already completed an MSc. PhD students participate in the weakly Departmental Seminar and staff in related fields also meet with students in bi-weekly reading groups. We currently take about five to six PhD students per year, and that programme is expanding rapidly.

Ben-Gad, Michael. 2008. "Capital-Skill Complementarity and the Immigration Surplus." *Review of Economic Dynamics* 11 (2): 335-365.
Lucas, Robert E. 1998. "Transforming Macroeconomics [interview by Brian Snowdon and Howard R. Vane]." *Journal of Economic Methodology* 5(1): 115-146.

Author Biography

Michael Ben-Gad is a professor in the Department of Economics, School of Arts and Social Sciences, at City University London. From 2010 to 2013, he served as Head of the Department of Economics, from 2008 to 2010 as Deputy Head, and also served as an elected member of the University Senate from 2010-2013. Prior to joining City University London, Prof. Ben-Gad worked in the research department of the Bank of Israel, was a member of faculty at the University of Houston and the University of Haifa and has worked as a Visiting Professor at the Central European University and the International School of Economics at Tbilisi State University, Georgia. He currently serves on the Academic Advisory Group of the Tax Administration Research Centre (TARC), an HM Revenue and Customs/HM Treasury/ESRC sponsored center jointly run by the Institute for Fiscal Studies and the University of Exeter, and is a member of a National Academy of Sciences panel studying the economic and fiscal impact of immigration in the United Staes. He has previously served as a member of the Conference of Heads of University Departments of Economics (CHUDE), Royal Economic Society; on the Board of Directors of the Israel Economic Association and as a member of the Economic Sciences Committee of the Israel Science Foundation. Prof. Ben-Gad's research focuses on dynamic macroeconomics with applications to taxation, public debt, the economic effects of immigration, optimal fiscal policy, as well as the emergence of multiple equilibria in models of economic growth. Major research grants include the Economics and Social Research Council (in collaboration with HM Treasury/ HM Revenue and Customs), the Israel Science Foundation and the Advanced Research Program, Texas Higher Education Coordinating Board. Prof. Ben-Gad has written numerous articles on immigration, fiscal policy and macroeconomic theory and his published work has appeared in such journals as: Economic Inquiry; Journal of Economic Dynamics and Control; Journal of Economic Theory; Journal of Macroeconomics; Research in Labor Economics and Review of Economic Dynamics. In recent years he has appeared on the BBC, CNBC, and in the Financial Times and Wall Street Journal discussing fiscal policy and the global

financial crisis. He has a B.A. in economics from the Hebrew University of Jerusalem, and M.A. and Ph.D. degrees in economics from the University of Chicago.