

What Does CORE's *The Economy* Offer Students and Teachers?

RAHUL DE

Responding to the special issue, "CORE's Economics Textbook" (EPW, 16 June 2018), a teacher who has used the book in class explains why the book has proved useful in conveying concepts in economics and inculcating an interest in the study of social sciences at large. *The Economy* is not only a well-thought-out and ideologically eclectic textbook, but an interactive and dynamic teaching and learning tool that incorporates digital resources.

This article is in dialogue with the special issue "CORE's Economics Textbook" (EPW, 16 June 2018). This response adds a teacher's perspective to the discussion around the relevance of *The Economy* textbook for the Indian education system. The articles in the special issue have discussed and debated the theoretical nuances, economics frameworks, and methodologies that differentiate *The Economy* from other standard economic textbooks. This article will focus on the technological and pedagogic resources offered by CORE and argue that these innovations create a more immersive and participative learning experience.

I have been using *The Economy* as the textbook for an introduction-to-economics course at Azim Premji University and found this textbook to be a very useful resource for undergraduate teachers and students of economics. This article is also based on reflections from an ongoing exercise that a few of us are a part of, about "Rethinking Undergraduate" economics in India (De and Thomas 2018), documenting the dialogue amongst multiple stakeholders of undergraduate economics about the challenges faced by undergraduate economic teachers and students. At this forum, many teachers noted that the teaching of economics has become like a technical subject, where the main content transacted is economic theories, mathematical methods, and data sets, and the main form of assessment is high-stake end-semester examinations. This model of education does not inculcate a strong conceptual understanding of the discipline or develop evaluative skills amongst students. As a consequence, economics students struggle to translate their learning into their work life or when pursuing a graduate/research degree. *The Economy* is one potential solution towards addressing some of the malaise

affecting undergraduate economics education in India.

Eclectic and More Democratic

The primary innovation of *The Economy* is that it changes the learning environment and the role of the teacher in the class to make it more immersive for students. In the rest of this article I will reflect on how the technological platform on which *The Economy* is built equips teachers in ways that a printed textbook cannot. I will also demonstrate through examples how the structure and narrative of *The Economy* creates a very different learning environment. *The Economy* is an open access and collaboratively written text. This means that anybody can view/download the book for free¹ after registering on the website. Students can access/download the textbook onto their mobile phones, allowing an ease of access to the resource.

Second, the CORE economics textbook has been collaboratively written by multiple authors,² each specialising in different areas of economics. One can discern this while reading the book as the style of writing is very accessible and the perspectives provided are ideologically balanced.

Moreover, since each author is writing within their area of specialisation, each chapter provides in-depth examples from their own research. This exposes students to contemporary research in economics. For example, in Chapter 11.6, Rajiv Sethi, one of the authors of the book, provides a live example of how double auctions determine share prices in a stock exchange. In Chapter 8.9, Katherine Grady, an economist who studies market competition, discusses the findings of her research in the Fulton Fish market and how the data she collected problematises the perfect competition market model.

Given the fact that *The Economy* can be accessed by anyone (with internet connectivity), is free, and is collaboratively written, makes it a democratic institution. This makes it fundamentally different from popular textbooks by Gregory Mankiw (2015), Hal Varian (2014) and Dornbusch and Fischer (2010), etc, which are shaped by the interest, training,

Rahul De (rahul.de@apu.edu.in) teaches economics to undergraduate students at Azim Premji University, Bengaluru.

and ideologies of one or two economists. Moreover, *The Economy* provides opportunities for other scholars to add to this body of knowledge. The expansion of the community involved in the writing of the textbook comes with two distinct advantages. First, the technology allows content to be updated without any extra cost, making the platform dynamic and up to date. Second, it allows specialised versions of the textbook to be written for different regions.

As mentioned in Basole and Jaydev (2018), currently a South Asian variant of *The Economy* is being drafted, which introduces Indian-specific data and case studies, and concepts, such as informality and duality, which are necessary to understand the Indian economy. The format of the book also allows data and problem sets to be updated regularly, so when a new round of the National Sample Survey Office or other surveys are conducted, then a summary of its main findings could be added in a new edition.

Eclectic Theory and Pedagogy

The Economy is less of a textbook and more of an app or online resource on the CORE (Curriculum Open-access Resources in Economics) platform, which offers a whole host of tools and resources to its registered users.

This introduces a certain degree of interactivity and dynamism in the learning process. All the graphs and figures used in the book are dynamic, and assist students in visualising the changes in variables that are occurring and how they influence the equilibrium solution. An example of this from the textbook can be found in Chapter 8.2 where the first graph shows the equilibrium price being determined by supply and demand curves. The concurrent graph shows a leftward shift of the demand curve caused by a change in taste and preferences of consumers, and the following graphs demonstrate how a new equilibrium price is established. These graphs can be scrolled through with the click of a button, making it an extremely convenient learning tool. This process of abstracting and understanding changes in equilibrium conditions can be quite difficult for a novice student; however,

the textbook provides multiple, dynamic graphs to aid in visualisation.

Many parts of the textbook are buttressed by other scholarly works, and the textbook links these other works in the main text. For example, Chapter 2.1 explains how capitalism first occurred in the British economy in the 18th century, and an embedded hyperlink allows students to access works by various economic historians³ giving multiple perspectives on the factors that led to the birth of the industrial revolution in the United Kingdom (UK). Furthermore, *The Economy* provides a set of resources to teachers and students that make the learning experience more participative and inclusive. Teachers are provided slide presentations, teaching guides, question sets, learning activities, classroom games, topics for discussion, and access to data used in the figures for each chapter. This allows teachers who may not have a strong grounding in economics to make their teaching more immersive.

Students can also read the textbook by themselves, as it provides many interesting resources to aid in self-study. These include a glossary of difficult terms, a section deriving or explaining mathematical formulas/models used in the textbook, and question banks with answers provided. Another innovative part of the book is a set of videos referred to as “Economist in Action,” which have short interviews with famous economists discussing their work and ideas, and are placed in sections introducing concepts that are related to their research. For example, Chapter 1.1 introduces how economists use data to understand the social world, and has well-known economist and author Thomas Piketty and Nobel Prize winner James Heckman discussing why economists need facts.

Aside from the technological resources and collaborative efforts that *The Economy* introduces, it inculcates a distinct philosophy of teaching that is needed in the Indian education system. Particularly, *The Economy* helps mentor independent thinking and autonomous students, and aids in creating a participative learning environment. One of the greatest challenges for a teacher to introduce students to economics is to immerse and excite

the students about the discipline. The greatest barrier to doing so is for students to treat economics as just another subject in which they have to learn formulas and theories and focus their intellectual energies in “cracking” the final exam. *The Economy*, instead of dividing economics into separate silos of microeconomics, macroeconomics, mathematics, statistics, development, history, etc, finds a narrative that infuses ideas from macroeconomics, microeconomics, history of economic thought and data into the learning experience. This helps introduce the student to the breadth of the discipline as well as provides depth in their conceptual learning.

A Closer Look

The first chapter of the textbook shows how *The Economy* has infused a very different learning philosophy in their structure and writing. This chapter introduces students to one of the foundational questions tackled in economics: What is economic growth and when did it start? The chapter starts with a summary of Ibn Batuta’s travelogues to demonstrate how human societies lived before capitalism. Then, a set of graphs⁴ compares inter-country growth rates over 1,000 years to demonstrate how sharply countries have grown over a period of time. A closer inspection of these graphs demonstrates that the UK was the first country to make this jump in gross domestic product (GDP) growth rate in the 18th century. Such a narrative introduces students to the importance of historical context in understanding economic processes as opposed to the idea of universal categories of analysis and creates curiosity in their mind. It then introduces long time period graphs of important variables in understanding an economy, such as labour productivity, technological change, and inequality, and makes the point that this increase in income is not a miracle or a coincidence, but part of a socio-economic revolution occurring in the UK in the 18th century known as the industrial revolution. The rest of the chapter explains what the industrial revolution is and how economic theories and data aid in understanding the processes that shaped it. The second

chapter introduces students to the production function and cost functions by using these tools to analyse the decisions made by textile industries in 18th-century England. The third chapter introduces the concept of consumer choice and uses this concept to explain how workers made decisions in 18th-century England.

The Economy introduces concepts by analysing historical case studies. This kind of questioning and investigating inculcates both a high degree of immersion as a student as well as an understanding that economics is a craft that develops skills in data analysis, economic theories, statistical tools, and the social sciences. It also demonstrates that this investigation requires students to borrow from multiple perspectives available within economics as well as other disciplines. Such a learning builds capacities in students that allow learning to be transposed to new problems. Instead of having my students learn graphs, theories, and models, I get them to use the same set of tools and concepts to intuitively answer a different question, like: Why did India grow so fast in the 21st century?

The structure of the chapters and the tools available within them allow teachers to introduce students to intermediate and complicated concepts through innovative perspectives. One compelling example can be found in chapter four where students are introduced to game theory. This chapter challenges the standard microeconomic concept of the self-interested rational individual who maximises utility, and instead introduces the notion that economic decisions are shaped by interaction with other human agents. Game theory is considered a tough sub-discipline within economics and is usually introduced as a final-year elective course in undergraduate programmes. *The Economy* places it in the beginning of the text because it believes that it is an important concept for students to understand the complexities of contemporary economic reality.

The book provides novel examples through which students understand the basic concepts of game theory and its applicability without getting confused by more complicated mathematical models.

The chapter introduces the concept of tragedy of commons or how a group of self-interested individuals could create social outcomes inimical to all parties. It uses the example of pollution and traffic in the city to explain the importance of this conceptual apparatus. Most students immediately connect this to their real-life experiences of living in urban areas. The chapter provides resources for teachers to facilitate a session where students play different games, like the ultimatum game, public goods game, etc. In this way, they understand the rationality and thinking behind an agent's behaviour. At this point, most students get immersed in their learning, rather than feel intimidated by complicated models and mathematics as happens with the usual game theory books. The learning of economics is not presented as an esoteric and challenging exercise, but as one which can be undertaken by all students who are interested in understanding social reality. The book then presents data from similar experimental games played by different social groups around the world, such as data of multiple rounds of the ultimatum game played by Kenyan farmers and American undergraduate students. This data is useful to compare the results of the game played in class and helps students understand game theory as a research tool. This chapter helps introduce students to the new directions in which economics research is heading, such as use of concepts from human psychology to analyse data generated through social experiments.

The Economy is a step in the right direction, making economics knowledge more democratic, learner centric, and creating material specific to a regional context. It is an important addition to the resources available to undergraduate economics teachers as well as students who are interested in economics, but have not found an accessible introduction. The benefits of textbooks like *The Economy* can be incurred only when multiple educational boards in India start moving away from standard economic textbooks and start adopting books which use updated information and India-specific data. One hopes that economics education will move away from being technical education to the kind of education that empowers students to investigate social and economic phenomenon within India.

NOTES

- 1 It can be downloaded for free on Android phones from the Google Play Store.
- 2 A team of more than 20 economists worldwide.
- 3 Such as David Landes, Robert Allen, and Kenneth Pomeranz.
- 4 Referred to as the hockey-stick model, as the curves have a sharp kink like a hockey stick.

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Social Policy

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The reach of social policy in India has expanded significantly in recent years. Reaching larger numbers of people than before, some benefits now take the form of enforceable legal entitlements.

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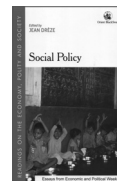
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