

TOWARDS A RENEWED PERSPECTIVE ON TEACHING TRADE

Junaid B. Jahangir¹

Abstract

The objective in this paper is to provide a renewed perspective on teaching trade. The idea is to create a teaching module like the one offered by the CORE textbook that blends microeconomics and macroeconomics concepts to address globalization. Neoclassical textbooks are contrasted with heterodox ones to provide a comparative outlook on key themes on trade. Subject material from various textbooks is complemented with YouTube videos, game theory applications, and a nuanced graphical analysis on topical issues. Apart from tariffs and current account deficits, the issues of fair trade, environmental sustainability, and economic sanctions are considered to appeal to students.

Keywords: CORE text; trade; teaching economics

JEL Classification: A22, F10

Introduction

In the aftermath of the financial crisis of 2008, some student groups criticized the way economics is taught exclusively through the neoclassical paradigm, and more through stylized mathematical models than real world issues. Hodgson (2019) notes how students “formed organizations, mounted demonstrations, pushed for alternative curricula and published books.” Likewise, Bowles and Carlin (2020) have promoted the CORE textbook, arguing for the need to address contemporary economics issues including climate change, economic inequality, and the future of work with globalization and automation, in introductory economics classes. Thus, student groups (Earle, Moran, and Ward-Perkins, 2017) have been bolstered by some faculty (Skidelsky, 2020; Bowles and Carlin, 2020; Komlos, 2019; Reardon et al., 2018) in the push for pluralist perspectives in economics education.

Given the shift in universities towards interdisciplinary approaches and critical thinking, especially in those institutions that focus on liberal arts education, instructors face the push towards providing pluralist perspectives. This is especially true in institutions like mine where the department of economics is combined with both anthropology and political science. Particularly, when students are exposed to various ideas on globalization, inequality, and climate change in other social sciences, some of them are put off by the stylized topics, technical treatment, and the lecture method of instruction in principles and intermediate level classes in economics. The criticism of this chalk and talk method of instruction in economics was led by Becker and Watts (1996). They reiterated that “economists are less likely to use non-lecture teaching methods than instructors in other fields” (Becker and Watts, 2001). However, Becker (2000) emphasized that students expect to be “actively engaged in the learning process” rather than “sit passively through lectures.” Similarly, in the context of nurturing critical thinking, O’Donnell (2010) highlights factors including “awareness of different viewpoints,” “thinking outside the conventional

¹ Associate Professor of Economics, Department of Anthropology, Economics, and Political Science, MacEwan University, 7-368, 10700 104 Ave, Edmonton, AB, T5J 4S2, Canada

framework,” and “openness to non-conformity” (p. 264). Thus, pluralist perspectives are justified through the argument of building critical thinking skills.

Overall, given the push towards pluralist perspectives, building critical thinking skills, and addressing real world issues, the main objective in this paper is to offer a renewed perspective on teaching trade to economics students. This is done by considering environmental sustainability, economic inequality associated with globalization, and geopolitics pertaining to Russia and China. A subsidiary objective is to transcend the chalk and talk method of instruction by complementing the content of this paper with a couple of YouTube clips and material from various textbooks to further student interest and engagement. In this regard, the paper brings microeconomics and macroeconomics concepts together to address the topic of trade. The approach adopted is simpler than that of the modules in the CORE textbook, as it avoids the use of intermediate level concepts like indifference curves and marginal rate of transformation. Instead, it provides a comparative view of standard economic theory and highlights topical issues including tariffs, fair trade, the environment, economic sanctions, and current account deficits. Yet, another objective is to assemble these topics in one place as a resource for instructors of principles or intermediate level special-topics courses, who would like to focus on topical issues in an accessible manner.

The paper is divided into ten sections. The motivation for facilitating a renewed perspective on teaching trade is provided in Section 2. In Section 3, a review of the standard neoclassical theory on free trade in three mainstream economics textbooks is undertaken, which is followed by a critical look at free trade and the Ricardian model from three alternative textbooks in Section 4. This facilitates introducing students to diverse perspectives in economics, which would strengthen their ability to hold conversations with peers outside economics and to build critical thinking skills by contrasting mainstream and alternate perspectives in economics. Additionally, starting from the end of Section 4, lesson plans are delineated at the end of each section with various activities such as discussing pluralist perspectives, doing in class calculations, using technology to find social media articles, and discussing ideas based on YouTube videos. In the spirit of pluralism, a nuanced perspective on tariffs is developed in Section 5. This is followed by considering topics that are not usually covered in principles level courses. Thus, the topic of fair trade is briefly addressed in Section 6, which is followed by the application of game theory to environmental concerns in Section 7, and to economic sanctions in Section 8. The use of a game theoretic approach is undertaken to elicit student interest. Finally, the issue of persistent current account deficits is addressed in Section 9, which remains a topical issue especially for the U.S. with respect to China. Concluding remarks are presented in Section 10.

Motivation

Krugman (1993) pushed for “a solid grounding in the principles of international trade,” as most ECON 101 students do not take higher-level economics courses, much less graduate in economics. Arguing against the need for a new paradigm, he emphasized that the basics of trade do not change. He mentioned that teaching about “high value sectors” is silly, trade policy including tariffs should not be debated based on jobs, government support for an industry draws resources away from other sectors, and that we should continue to teach the fundamentals of comparative advantage as propounded by Ricardo. Krugman (2020) reiterated the message that both economists and business leaders had a consensus that Trump’s tariffs on steel and aluminum were a bad idea, and that the world did not see a shift towards protectionism after the 2008 financial crisis even as he mentioned the backlash against globalization from labor groups and business

interests (p. 246, 252). Thus, Krugman remains a proponent of teaching Ricardian principles and the basics of free trade.

Like Krugman, critics of free trade, who are more open to heterodox perspectives in economics, strongly reject protectionist policies that are led by “right-wing, isolationist political movements” (Earle, Perez-Rocha, and Sinclair, 2019, p. 9, 81). However, concerned about the impact of corporation-led globalization on lowering worker wages and environmental standards, they argue for trade that rests on human rights rather than corporate rights (p. 80). Similarly, while Gassler (2020) constructs the “neoclassical argument against free trade,” he emphasizes that “we are better off with globalization than without” with the caveat that it should conform to the UN Sustainable Development Goals. Thus, heterodox economists tout the benefits of trade even as they express concerns about labor rights and environmental sustainability. This suggests that a renewed perspective on trade can be facilitated by incorporating concerns related to the environment and other issues while teaching the basics of trade as propounded by Krugman. Such an approach facilitates teaching pluralist perspectives on trade including both the neoclassical and alternate paradigms. As noted earlier, this approach of comparing diverse ideas helps build critical thinking skills and enables students to have more informed conversations with peers outside economics.

In addition, there is the criticism of the chalk and talk method led by Becker and Watts (1996). However, Hoyt and McGoldrick (2019) have documented the use of instructional methods beyond the chalk and talk method over a span of 50 years. These modes of instruction include semester long games and simulations, field work through involvement in community, undergraduate research, writing and presentations like one-minute papers, technology like clickers and Aplia platforms, the use of social media, and the use of literature, paintings, drawings, popular movies, animations, and music, as a way of engaging students in a more creative way. In the specific context of trade, Geerling et al. (2021) have used short video clips from eleven different countries to introduce students to topics in the principles of economics including free trade. Strow and Strow (2004) use a game to teach students that while some individuals may be hurt, the country overall is made better off by trade. This has allowed them to address student criticism that free trade leads to the exploitation of poor countries. On the other hand, Weber (2007) addresses student concerns by showcasing how free trade allows the option of increased leisure, lower pollution, and the use of fewer natural resources instead of increased consumption. However, he expounds technically through indifference curves and without offering much rationale behind the process. This is problematic because economics students end up with only a technical exposition that does not allow them to discuss real world issues with their peers in other social sciences.

Overall, the critique of the lecture method, the limits of abstract models in enabling interdisciplinary conversations, and the significance of pluralist perspectives in building critical thinking skills all motivate a renewed approach to teaching trade to economics students at both principles and higher levels. This approach is undertaken by considering diverse perspectives in economic theory on trade and tariffs and by considering topical issues of fair trade, the environment, geopolitics pertaining to Russia and China, and current account deficits in the context of U.S. and China. Additionally, some of these topics are complemented with video clips, for such an approach reinforces concepts and ideas and catches student interest in a way that traditional pedagogies cannot. The idea is not to overwhelm the instructor but to assemble the topical issues and resources in one place. This means that those teaching principles classes can borrow and focus on some topics given time constraints, while those teaching intermediate level special-topics classes can use multiple topics to teach an entire module on trade that rests on both

microeconomics and macroeconomics concepts. Finally, a lesson plan is provided for each topic by highlighting activities, questions for discussions, key concepts, and learning outcomes. Thus, by adopting pluralist perspectives, using video clips and games, and considering topical issues, a renewed perspective in teaching trade is effectively presented.

A review of mainstream economics textbooks

Mankiw, Kneebone, and McKenzie

The Mankiw, Kneebone, and McKenzie (2020a, b) textbooks are popular because of their simple approach. These textbooks are used by the author to teach principles of economics courses. However, the topic of free trade does not appear in one chapter and a comprehensive treatment requires collecting material from various chapters across both the microeconomics and macroeconomics textbooks. Chapter 1 in Mankiw, Kneebone, and McKenzie (2020a) indicates that “free trade can make everyone better off”. By using the word “can,” it offers a nuanced principle, which is appreciated even by Goodwin (2014), who is extremely critical of Mankiw’s principles of economics. In Chapter 3, the case for free trade is made by showing how a point beyond the production possibility frontier (PPF) becomes feasible through trade. This case is made through calculations and graphs, which does not allow students to fluently engage in discourse on real world issues. The arguments in support of free trade arrive in Chapter 9.

Chapter 9 indicates that there are losers from trade, who are often not compensated. It mentions that free trade creates jobs just as it destroys them and supports government policies to facilitate worker transition to new jobs. Additionally, it highlights the dead weight loss from a tariff and counters the arguments for restricting trade. In the context of Trump’s tariffs on steel and aluminum, and in the case of the infant industry argument, it mentions that protection is often given to powerful industries that exaggerate their role in national defense. It states that once instituted, protection is difficult to remove, and that protection is not necessary for the growth of infant industries. Similarly, it states that taxpayers bear the cost of protection. However, Chapter 17 on oligopoly assigns a prisoner’s dilemma game where the dominant strategy for both countries and hence the Nash equilibrium is that of the imposing high tariffs.

Chapter 12 in Mankiw, Kneebone, and McKenzie (2020b) showcases the identities $NX = NCO$, $S - I = NCO$, and $Y = C + I + G + NX$, to indicate that current account deficits are synonymous with net capital inflows, investment more than saving, and expenditure greater than income. Chapter 13 assigns a problem which yields the understanding that persistent current account deficits are due to low saving rate relative to investment. The chapter also shows that trade restrictions do not work, as the real exchange rate appreciates, which reduces exports and therefore net exports remain unchanged. Thus, students learn that reducing current account deficits requires increasing saving relative to investment. However, they also learn in Chapter 7 that investment contributes to growth through capital stock accumulation. Therefore, they note that in the absence of domestic saving the economy has to rely on foreign borrowing to grow, which means that subsequent profits are shipped overseas. On the other hand, if the rate of growth is greater than the cost of borrowing, net capital inflow should not be much of a problem.

Overall, the Mankiw, Kneebone, and McKenzie (2020a, b) textbooks make a strong case for free trade by countering the arguments for restricting trade, showcasing the deadweight loss due to tariffs, and highlighting the ineffectiveness of trade restrictions. However, creating a comprehensive module on trade requires collecting the material from the various chapters of the textbooks. Additionally, the textbooks do not showcase the assumptions of the Ricardian model

on trade or the new trade theory that bases the case for free trade on economies of scale. Thus, a renewed outlook requires complementing the textbooks with additional material.

Krugman, Wells, Au, and Parkinson

The Krugman et al. (2018) macroeconomics textbook is considered because of Krugman's association with the new trade theory and because of his distinguished stature in international economics. Chapter 5 on international trade offers the usual quantitative case for free trade based on comparative advantage, the dead weight loss due to tariffs, and the critique of arguments for protectionism. These arguments, which include the vulnerability of supply chains during international conflict and support for high tech industries, are countered by mentioning that politically influential industries seek protection and that governments are poor predictors of winning technologies. However, unlike the Mankiw, Kneebone, and McKenzie textbooks, Krugman et al. provides a relatively comprehensive treatment of the topic. Specifically, Chapter 5 mentions reshoring that is emerging because the cost saving due to outsourcing is increasingly being offset by the disadvantages of long shipping times and other issues. This would possibly include rising energy prices and the increasing labor costs in China.

The chapter expressly indicates the reasons behind comparative advantage, which include differences in climate, factor endowments, and technology. In mentioning technology, it underscores the point that comparative advantage is not static and is subject to change based on a country maintaining its technological edge. Additionally, it expressly highlights the Heckscher-Ohlin model to state that trade increases the return to factors that are abundantly available, so that the wages of high skilled Canadian workers increase and those of low skilled Canadian workers decrease thereby exacerbating inequality within the country. Thus, even as inter-country inequality declines, as unskilled workers who are abundant in labor-intensive developing countries gain, inequality within developed economies increases. In short, the Krugman et al. textbook offers a relatively nuanced depiction of trade by viewing the concept of comparative advantage as dynamic and by highlighting the challenges of globalization that arise due to inequality and outsourcing despite the recent rise of reshoring production and jobs.

Ragan

The Ragan (2020) microeconomics textbook builds the case for free trade based on economies of scale and learning by doing, as shown by new trade theory. This allows for an explanation for why developed countries specialize in similar but differentiated products and trade among themselves, thereby providing consumers more choice. Chapter 32 expressly indicates that current comparative advantage can be lost if a country fails to innovate and adopt the latest technologies, and it therefore allows for the role of policy through tax incentives in developing new comparative advantage. This allows a country to avoid perverse specialization based on resource-based primary products. Additionally, the chapter explicitly mentions that while there is no need to discard Ricardian theory, it is equally true that comparative advantage can be shaped by public policy and private entrepreneurship, as in the case of Taiwan's electronics industry. However, this conclusion is tempered with the fact that not all governments have been successful in creating such comparative advantage, as in the case of Ireland and automobiles.

Chapter 33 goes further to indicate that a large open economy can improve its terms of trade, defined as the ratio of export prices to import prices, by tariffs that would lower the price charged by foreign exporters. It also justifies protection through tariffs based on new trade theory with the caveat of removing such protection from unsuccessful infant industries ruthlessly, as done

by Taiwan and South Korea. Additionally, it showcases strategic trade policy, according to which domestic firms can be supported by taxpayers, with the caveat that such a policy can be problematic, as governments are likely to make bad decisions in picking winners in the industry. Finally, the chapter indicates that using protection to create domestic jobs is a bad policy because it expands employment in inefficient importing industries and contracts employment in efficient exporting industries. Overall, by delving into dynamic comparative advantage, new trade theory, and rationalizing the role of tariffs under specific conditions, the Ragan textbook offers a more diverse perspective on trade than the Mankiw, Kneebone, and McKenzie textbooks.

Overall, mainstream textbooks offer the standard quantitative treatment of comparative advantage, counter the arguments for restricting trade, and highlight the deadweight loss due to tariffs. In this regard, the Mankiw, Kneebone, and McKenzie textbooks uphold the standard neoclassical paradigm. On the other hand, both the Krugman et al. and the Ragan textbooks offer a relatively more nuanced depiction of trade by delving into dynamic comparative advantage, highlighting the challenges of globalization that arise due to inequality and outsourcing, or rationalizing the role of tariffs under specific conditions. However, generally the textbooks do not critically delve into the assumptions of the Ricardian model based on comparative advantage, an approach that is upheld by heterodox textbooks.

Alternative perspectives

CORE: The Economy

One inspiration for this paper comes from the CORE online textbook that provides modules on topics like globalization, climate change, and inequality. Chapter 18 of the CORE textbook offers a capstone module on globalization that brings together microeconomics and macroeconomics concepts to address the topic. It states that exchange can lead to unfair distribution of gains and that policy including tariffs can lead towards fairness. It underscores that new trade theory offers a justification for tariffs. While it extols the benefit of trade through sharing of technology, it highlights the cost of perverse specialization. Additionally, it states that there are different routes to growth, for the U.S. used tariffs against British competition in the late 1800s, Scandinavia balanced openness with high taxes for social safety and worker retraining, and East Asian countries picked national winners and offered protection from imports.

On current account deficits, it states that if the borrowed funds through capital inflows are used for investment, then foreign debt can be repaid. On comparative advantage it refers to economies of scale and economies of agglomeration apart from climate and factor endowments. It also mentions that inequality results when skilled workers gain in capital-intensive countries and unskilled workers lose out. On the environment, it raises the concern that governments oppose environmental sustainability and economic justice through lax regulation, less protection for labor, and lower taxes to attract foreign direct investment. Thus, it emphasizes the tradeoff between globalization and democracy. Overall, the CORE textbook indicates the issues of inequity and environmental sustainability with trade, the justification of tariffs through new trade theory, and the cost of perverse specialization. However, the textbook is fraught with information overload, as students navigate from one link to another and as they are exposed to intermediate level concepts like indifference curves and marginal rate of transformation at the principles level. Additionally, it has met with myriad criticisms including the complexity of language, which has been conceded by Bowles and Carlin (2020). This necessitates looking at other alternative perspectives.

Komlos

The Komlos (2019) textbook is written as a critique of standard mainstream neoclassical theory that is found in textbooks. Chapter 13 delves into international trade and offers a strong critique of the Ricardian model on comparative advantage. It states that Ricardian theory does not account for current account deficits and exchange rate manipulations, as has been done by China in recent years to keep the value of the yuan low. Additionally, the theory is built on the assumption that those who lose jobs would find employment in a different sector, which goes against the notion of pareto efficiency if they are unable to do so and hence are made worse off. The theory also assumes that goods are produced competitively, whereas most traded goods are produced by oligopolies. Moreover, according to the chapter, the Ricardian model was refuted by Krugman, as countries trade the same goods among themselves, which is explained through economies of scale, branding, and diversity in consumption.

The chapter highlights the welfare enhancing property of tariffs given unemployment, as there would be a gain to the workers through the multiplier effect. Additionally, it indicates that even if consumers lose because of higher prices, these losses are dispersed among many people, whereas the gains are concentrated among the smaller group of workers. Moreover, the benefit of low-priced consumer goods under free trade cannot trump the cost brought by underemployment. Such an argument turns the tables, as neoclassical economics focuses on the losses of the smaller group of losers and gains dispersed among millions of consumers under free trade. The chapter also mentions that free trade is not an engine of growth, for while China was able to translate the gains from trade by investing its profits, the U.S. bought consumer goods, which does not have lasting growth effects. Overall, the Komlos textbook offers a strong critique of the Ricardian model, highlights the welfare-enhancing role of tariffs, and critiques trade as the engine of growth. In doing so, it takes a stronger position than the CORE textbook.

Reardon, Madi, and Cato

The Reardon, Madi, and Cato (2018) textbook offers another heterodox perspective, and like the CORE textbook, it blends microeconomics and macroeconomics concepts together in various chapters. Chapter 16 indicates that free trade is not necessarily fair trade and that it relies on cheap energy, which is unsustainable. It mentions that trade takes a heavy toll on the environment, as mass production is undertaken in countries with poor environmental standards and low wages, and as components of the goods are transported across the world many times before the final goods are sold. It also delves into a critique of the Ricardian model by mentioning that it was developed in a time without concern for environmental limits. It adds that free trade strengthens the economic power of elites in poor countries and exposes unskilled workers in developed countries to international competition, which reduces their wages. The chapter mentions that Ricardo himself acknowledged the unrealistic assumptions of his theory, which include that the two countries should be relatively equal in wealth to prevent the richer country from getting more favorable terms of trade, have perfect competition, have full employment, and have constant instead of increasing returns to scale so that smaller countries could produce just as efficiently as the bigger ones. Overall, the Reardon, Madi, and Cato textbook rejects free trade as beneficial for all contexts and all times, alludes to fair trade and the detrimental impact on the environment, and critiques the unrealistic assumptions of the Ricardian model.

To recapitulate, the review of the mainstream neoclassical paradigm on trade in Section 3 and of alternative approaches in Section 4 indicates that there are multiple perspectives on the subject, where each author adopts positions that may cut across ideological divides. Nonetheless,

a generalized classification of the neoclassical and alternative perspectives is provided in Table 1, which facilitates a comparative outlook on both paradigms.

Table 1: The neoclassical paradigm and alternative perspectives on trade

Topic	Neoclassical paradigm	Alternative perspective
<i>Ricardian model</i>	Specializing based on comparative advantage allows the economy to consume beyond the production possibility frontier	Ricardian model is based on unrealistic assumptions of full employment, perfect competition, and may lead to perverse specialization
<i>Comparative Advantage</i>	Rests on differences in climate, factor endowments, technology	Comparative advantage can be lost if countries do not keep up with technological advancement; government policy and private entrepreneurship can shape comparative advantage
<i>Growth</i>	Developing countries have been able to grow by access to international markets; the biggest benefit arises from transfer of technology	Free trade is not an engine of growth, for where China was able to invest its gains, the U.S. has focused on consumption that does not have lasting growth effects
<i>Environment</i>	Trade allows higher income and access to new technology, which can be used for the environment	With global supply chains, goods are transported many times across the globe that takes a toll on the environment; countries can engage in a race to the bottom with lax environmental standards to attract foreign direct investment
<i>Inequality</i>	Trade has led to a decrease in inequality between developed and developing countries	Intra country inequality has been exacerbated, as unskilled workers in developed countries have lost jobs; the elites in developing countries have gained where labour works in poor conditions
<i>Tariffs</i>	Protectionism through tariffs or quotas leads to inefficiency (dead weight loss); there is rent seeking by powerful industries that can lobby; the	Tariffs can be welfare enhancing under conditions of high unemployment; the cost of tariffs is dissipated across millions of consumers,

	cost of saving one job can exceed a million dollars	but the benefit is concentrated among smaller groups of workers, which is worthwhile
<i>Current Account Deficits</i>	Current account deficits are concomitant with net capital inflows, which allow for growth when domestic saving is not enough for investment; if growth is greater than the cost of borrowing, such deficits do not matter	Persistent current account deficits are problematic, as jobs are lost; net capital inflow is problematic if domestic assets are increasingly owned by foreigners who can assert political influence and siphon off profits abroad

Lesson Plan

Activity: Assign chapter 9 from Mankiw, Kneebone, and McKenzie (2020) and chapter 13 from Komlos (2019) as background reading. This pairing works best, as the latter textbook is written as a critique of standard neoclassical textbooks (Jahangir, 2020). Create student groups based on class size and assign a topic from Table 1. Facilitate one group to adopt the neoclassical perspective and the other to defend the alternate perspective. Ask them why they selected the perspective and what would allow them to adopt the other perspective. Allow room for non-binary positions so that students can traverse rigid binary boundaries and hold multiple perspectives. Present Table 1 in advance to students as a base for class discussion. This activity could replace a whole lecture in an intermediate level special-topics class or could take about 20-30 minutes in a principles level class if the instructor decides to focus on one or two topics.

Key concepts: All topics in Table 1 can be considered in an intermediate level special-topics class, whereas, only a few topics can be selected at the principles level based on time constraints and the content emphasized by the instructor. The key concepts and ideas are based on the topics in Table 1 including comparative advantage based on specialization; the issue of perverse specialization; the efficacy of active government policy in creating comparative advantage; the impact of trade on economic growth, environment, and inequality; the impact of tariffs on efficiency and welfare; and whether we should be worried about persistent current account deficits.

Questions for Discussions: The instructor will have to lead discussions in the case of weaker or indifferent students. Following is a brief sketch of sample questions and suggested answers.

1. If a country like Pakistan is endowed with cotton, then should it focus on developing its comparative advantage based on cotton?

Perspective 1: Focus on comparative advantage, as it would allow to go beyond the PPF

Perspective 2: Specializing in cotton could lead to perverse specialization, as the country faces price volatility in the market for cotton

2. What is the impact of trade on economic growth, inequality, and the environment?

Perspective 1: Trade leads to a greater variety and more and cheaper goods; it has allowed developing countries like Bangladesh to grow rapidly thereby reducing inequality between advanced and developing economies; it allows developing countries access to new technology that can be used to address environmental damage

Perspective 2: Developing countries face balance of payment and currency crises as in the recent cases of Sri Lanka and Pakistan; inequality has exacerbated in advanced economies as jobs have been offshored; corporations in advanced economies can buy environmental offsets so that they merely shift pollution from one location to another

3. Are tariffs beneficial or detrimental to the economy?

Perspective 1: Protectionism is led by rent-seeking firms that gain at the expense of taxpayers and consumers

Perspective 2: Tariffs can be welfare enhancing in the presence of unemployed and underemployed labor and resources

4. Should we worry about persistent current account deficits?

Perspective 1: current account deficits go with net capital inflows that allow foreign investment, which is not an issue if economic growth is greater than the interest rate

Perspective 2: jobs are lost in the export sector; corporate profits are siphoned off abroad

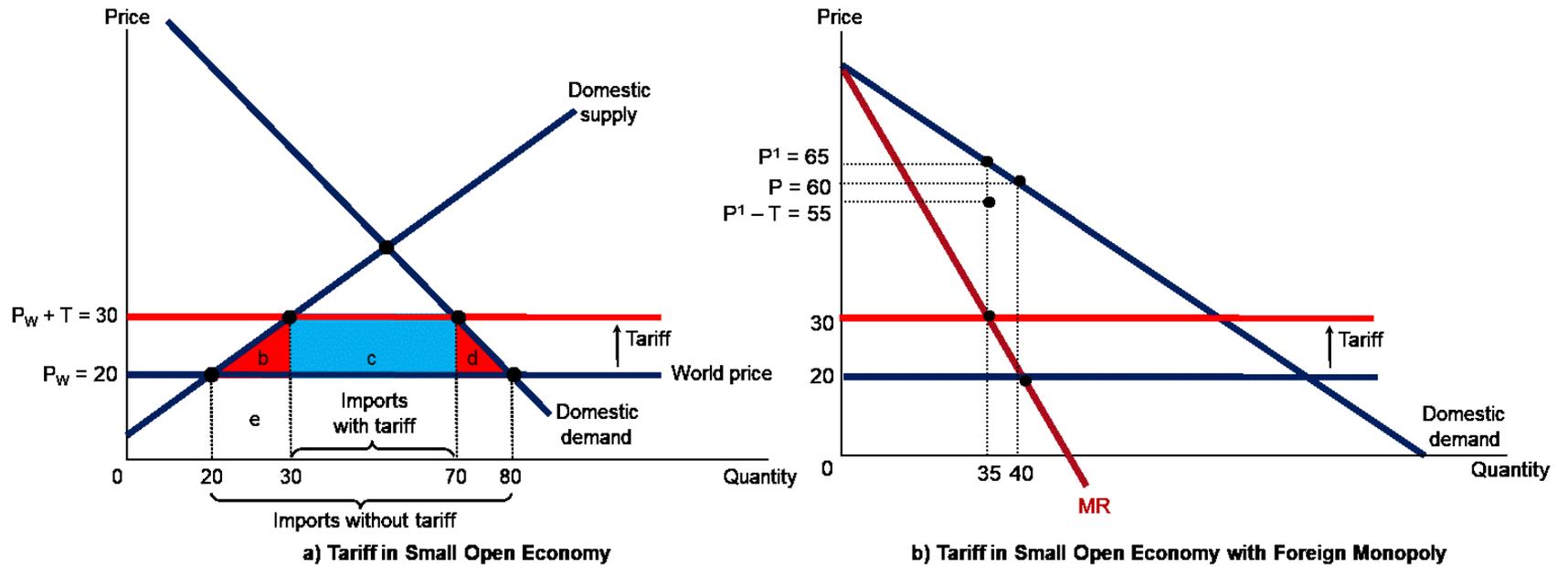
Learning outcomes: Such an activity exposes students to diverse perspectives and allows building critical thinking skills, as students contrast different positions.

A nuanced perspective on tariffs

There has been a general concern on economic inequality, as unskilled workers in developed countries have faced the brunt of globalization through lower wages or loss of jobs. Therefore, tariffs constitute a topical issue especially with former President Trump's rhetoric on bringing jobs back to the U.S. and with the institution of tariffs on steel and aluminum. The phenomenon of reshoring also counters the general trend of offshoring, as corporations no longer experience cost advantages in setting up manufacturing plants overseas due to rising wages and transportation costs. Yet, standard mainstream neoclassical theory rejects protectionism, including tariffs, which dissuade corporations from seeking cost saving efficiencies by outsourcing or offshoring.

Standard neoclassical textbook theory also substantiates the argument against tariffs through a welfare analysis exercise that highlights how deadweight loss arises with tariffs, as consumers end up buying less and as inefficient domestic production takes resources away from other sectors. Figure 1a illustrates the case of a small open economy with competition where the world price P^w is taken as given by the importing country. The demand ($Q^d = 100 - P$) and supply equations ($Q^s = P$) are kept simple for the calculations, which involve the world price ($P^w = 20$) and a tariff ($T = 10$). The standard analysis shows deadweight loss because of areas b (inefficient production) and d (lower consumption), which yield a total of 100. Thus, standard mainstream neoclassical theory shows how tariffs introduce inefficiency in the economy.

Figure 1: Welfare analysis of a tariff with a small open economy



However, Komlos (2019) turns the standard analysis on its head. Alluding to the assumption of full employment in the Ricardian model, he argues that with unemployment, workers gain area e (200), as they now have jobs with the imposition of a tariff. Therefore, with the gain of (b + e) and loss of (b + d), the net impact of a tariff is (e – d). Based on the calculations, this yields a net gain of 150 (250 – 100). Thus, even with the standard analysis, a justification for tariffs can be provided when the assumption of full employment is relaxed. Additionally, through stylized calculations, Komlos also shows that the loss of tariffs is spread over millions of consumers, but the gains are concentrated among a small group of workers. For instance, even if the loss from tariffs is \$10 million, then divided among 30 million consumers, the annual cost is dissipated to roughly 33 cents per consumer, whereas even a gain of just \$500,000 divided among 50 workers constitutes a \$50,000 annual income each. This provides an alternate perspective to the standard neoclassical paradigm on the merits of free trade and rejection of tariffs.

However, even standard neoclassical theory shows conditions under which tariffs can be rationalized, as in the case of a large open economy that gains due to improved terms of trade with the imposition of a tariff. The Feenstra and Taylor (2014) textbook, which is used in elective international economics classes, showcases a model in Chapter 9 with a small open economy that imposes a tariff on goods sold by a foreign monopoly (pp. 291-293). For the purposes of this paper, a simple numerical example is created based on this model. Specifically, based on the same demand curve ($Q^d = 100 - P$) and the associated marginal revenue curve ($MR = 100 - 2Q$), Figure 1b shows that the imposition of a tariff ($T = 10$) increases the original price of 60 to only 65, as the foreign monopolist absorbs part of the tariff by lowering its price to 55. Thus, while consumers lose $[(65-60)*35 + (65-60)(40-35)*0.5]$, the government gains $[(65-55)*35]$ in tariff revenues, which leads to the net effect of $[(60-55)*35 - (65-60)(40-35)*0.5]$. Based on the calculations this constitutes a net gain of 162.5 (175 – 12.5), which underscores the point on the welfare enhancing property of tariffs under certain conditions.

Overall, complementing the standard neoclassical textbook analysis with a popular socially relevant video and with alternative perspectives from a heterodox approach and a simplified analysis from a higher-level textbook provides a more interesting, richer, and diverse perspective on tariffs to economics students.

Lesson Plan

Activity: Based on the instructor approach and preparation level of the student cohort, a mathematical treatment of tariffs can be undertaken with simple calculations shown above. The instructor will have to direct these calculations step by step. Students should be actively engaged with the calculations and the instructor should wait for their answers before transcribing them to the white board.

Key concepts: The focus is on the positive and negative impact of tariffs

Questions for Discussions:

1. Are tariffs beneficial or detrimental to the economy?

Perspective 1: Tariffs lead to inefficiency (see the dead weight loss b and d in Figure 1a)

Perspective 2: Tariffs can be welfare enhancing in the presence of unemployed and underemployed labor and resources and in the case of a foreign monopoly (see the net gain of 150 from Figure 1a and of 162.5 from Figure 1b)

2. Should Nike shoes be made in the U.S. (or Canada based on the home country)?

Perspective 1: Based on comparative advantage, Nike shoes should be made in a developing country with lower labor costs otherwise they will be quite expensive

Perspective 2: Advanced economies like the U.S. have lost many blue-collar jobs that have disrupted whole communities; unless the individuals who lose because of free trade are compensated, free trade is not a win-win proposition; with the pandemic and rising concerns on climate change, the issue of supply chain disruptions and GHG emissions due to transportation have become pressing; there is also a trend towards re-shoring of companies; therefore such considerations should be reflected in the decision to offshore jobs like assembling Nike shoes in the first place

Learning outcomes: Students can see the connection between basic mathematical calculations and the diverse positions on tariffs. They would learn that there are multiple answers to the same question.

Whither Fair trade?

Economics students can connect with chocolate and as an exercise they can be directed to the FAQ page of the Organic House that specializes in chocolates in Ontario, Canada. On the query on fair trade, their FAQ page states:

“Is your chocolate fair trade? Better - it's ethically sourced and direct trade. We pay the farmers more than if it was fair trade. We ensure there is no child labour that comes with our cacao.”

Source: <https://www.theorganichouse.ca/pages/faqs>

This indicates that the hype around fair trade from a few years back when it was heavily promoted in coffee shops and chocolateries now seems to be channeled towards ‘direct trade.’ Generally, textbooks do not delve much into fair trade save on a single page, where the matter is presented as a passing topic. Chapter 7 of the Carbaugh (2013) textbook, which is used in elective international economics classes, states that the objective of the fair trade movement is to increase the income of poor farmers in developing countries through a system where they can bypass middlemen and sell coffee beans directly to roasters and retailers. However, it also mentions the criticism that the biggest winners from fair trade have been retailers, who sometimes charge huge markups while promoting themselves as corporate citizens, and that consumers do not know how much of the price goes to the poor farmers (pp. 235-236).

Dragusanu, Giovannucci, and Nunn (2014) mention that fair trade rests on price floors that cover the average cost of sustainable production, which includes banning of harmful chemicals and genetically modified crops. It is also based on a fair trade premium that allows investment in community infrastructure including schools, health clinics, electricity, water systems, and roads. The authors state that fair trade farmers receive higher prices, greater access to credit, find

themselves economically more stable, and get incentivized to engage in environmentally friendly framing practices. However, they also note that as more producers become certified as fair trade farmers, it dissipates monetary benefits, and any rents go towards the cost of certification. It is therefore not surprising that direct trade is deemed preferable to fair trade, as it avoids the pitfalls of the latter. Overall, however, students can be exposed to a discussion on the issue for a broader perspective on trade, as mainstream principles textbooks simply gloss over the topic.

Lesson Plan

Activity: Instructors can direct students to the FAQ page of the Organic House chocolaterie in Ontario or to any other chocolate shop in their respective regions. Students should be allowed to use their cell phones, tablets, or laptops to actively engage in discovering the difference between fair trade and direct trade. Advanced students can be assigned the Dragusanu, Giovannucci, and Nunn (2014) paper to discuss in class and compare with textbook theory on free trade. Instructors can also direct students to find information for class discussions from short newspaper, magazine, or other articles on social media.

Key concepts: The distinction between free trade, fair trade, and direct trade

Questions for Discussions:

1. What are the pros and cons of free trade and fair trade?

Suggested answer: Free trade allows access to a greater variety and more and cheaper goods. Fair trade ensures that farmers are not exploited and the environment is not damaged in the process of extracting cocoa or coffee beans. However, fair trade goods are more expensive and some corporations siphon off huge share of profits even as they promote themselves as offering fair trade products. This has led towards direct trade where middlemen are removed.

Learning outcomes: Students will learn to contrast differing perspectives on trade and actively use technology to find information for class discussion purposes in real time.

Game theory and the environment

Game theory is generally introduced to first year students through the prisoner's dilemma. Its application to trade is provided in the context of an exercise where the dominant strategy for both countries is to impose high tariffs, thereby making themselves worse off in the Nash equilibrium (Mankiw, Kneebone, and McKenzie, 2020a, p. 394). Applications on strategic trade theory arrive in intermediate-level economics courses, where usually the case of Boeing and Airbus is considered in the context of subsidies provided respectively by the U.S. and European governments (Carbaugh, 2013, pp. 213-215; Feenstra and Taylor, 2014, pp. 352-358). Both games offer the standard lessons that tariffs decrease welfare, and that subsidizing firms hurt taxpayers, and are only likely to be effective if the other firm exits the market. However, environmental issues in the context of free trade provide a more topical illustration of game theory applications.

The Carbaugh (2013) textbook indicates that free trade leads towards a race to the bottom in environmental standards, as corporations shift production to pollution havens, for poor countries place a higher priority on jobs and income instead of the environment (p. 192). However, it also

states that by disseminating environmentally friendly technology and by stimulating growth, free trade induces the demand for a cleaner environment (p. 193). In terms of game theory applications, Feenstra and Taylor (2014) assign a question on addressing global and local pollution respectively (p. 409). The idea is to showcase that with global pollution, the government puts more weight on producer profits than consumer welfare, as part of the costs are borne by the other country. However, with local pollution, the government puts more weight on consumer welfare than producer profits, as the costs to consumers outweigh the benefits to producers. Based on this idea, Figure 2 showcases the following two games, where the home country moves row wise, and the foreign country moves column wise. The games illustrate that the Nash equilibrium is to not regulate with global pollution (70, 70), and to regulate with local pollution (70, 70). Overall, the games indicate the need for multilateral agreements for the environment in the context of free trade and global pollution.

Figure 2: Global and Local Pollution

2a. Global Pollution

Home / Foreign	Regulate	Don't Regulate
Regulate	80, 80	50, 100
Don't Regulate	100, 50	70, 70

2b. Local Pollution

Home / Foreign	Regulate	Don't Regulate
Regulate	70, 70	70, 50
Don't Regulate	50, 70	50, 50

Lesson Plan

Activity: Both economic inequality and climate change are pressing issues of contemporary times. The impact of trade on the environment can be addressed through a simple game theory application even at the principles level where students are already exposed to the Nash equilibrium and the Prisoner's Dilemma game. The instructor can make use of the games in Figure 2 to showcase the free rider problem in the case of environmental regulations on global pollution.

Key concepts: the impact of trade on the environment; game theory application of the Nash equilibrium

Questions for Discussions:

1. What is the impact of trade on the environment?

Perspective 1: Trade allows developing countries access to new technology that can be used to address environmental damage

Perspective 2: Corporations in advanced economies can buy environmental offsets so that they merely shift pollution from one location to another; developing countries engage in a race to the bottom by relaxing their environmental laws to attract corporations; with offshoring many goods

are produced, assembled, and finalized in different countries across the globe, so all this transportation contributes to GHG emissions

2. Why is it difficult to have multilateral agreements on combating global pollution?

Suggested answer: Free rider problem, where one country gains by continuing with business as usual as the cost of pollution is passed on to other countries (see the game in Figure 2a); the cost of environmental regulation is borne by one country where another can attract foreign investment by offering lax environmental regulations

Learning outcomes: Students can learn to contrast different viewpoints on the impact of trade on the environment. They can learn about the difficulty in achieving multilateral agreements on the environment through a game theory application.

Game theory and economic sanctions

Like fair trade and environmental sustainability, geopolitics is not usually considered at the principles level. However, a renewed perspective on international economics and trade warrants considering the 2022 Russian invasion of Ukraine and the subsequent economic sanctions by the West. In this regard, the Carbaugh (2013) textbook indicates that economic sanctions are successful if many countries impose sanctions, when the target nation has strong economic and cultural ties to the imposing nations, and contingent on the strength of the political opposition in the target nation (p. 217). This indicates the concern with western sanctions on Russia, as China and India among other countries in the global South want to retain their ties to Russia and because of President Putin's control of any opposing Russian oligarchs.

In terms of game theory, the educational blog Networks (2014) showcases a game that involves strategies by Russia and NATO. Figure 3 illustrates the game, where NATO moves row wise and Russia column wise. The game shows a nuclear outcome when NATO adopts a hawkish approach and Russia persists in the invasion of Ukraine. It shows that if Russia backs down with a hawkish NATO, the latter gains only 2, because of its heightened commitment of soldiers and weaponry. However, if Russia persists and NATO remains passive, Russia gains a relatively higher 5, as it gains by meeting its territorial objectives. Finally, NATO gains 5 if Russia unilaterally backs down, as NATO would not have to be in a state of heightened vigilance. Overall, the Nash equilibrium (0,5) shows the current status quo of a passive NATO and the persistence of Russian invasion.

Figure 3: Russian Invasion of Ukraine

NATO / Russia	Follow Through	Back Down
Aggressive	-15, -15	2, 0
Passive	0, 5	5, 0

The Russian invasion of Ukraine warrants another question on the feasibility of economic sanctions were China to invade Taiwan. This question is relevant if calls for boycotting Chinese goods increase given concerns on China's spy network in western countries, debt trap where ports and large infrastructure are taken over by China, and the possibility of using the belt and road initiative for military purposes, as highlighted by Dhruv Rathee in his educational YouTube video.

His video elicits the question whether the world is prepared to look for substitute goods and willing to pay a higher price, were it to boycott Chinese goods. Rathee's popular 15-minute video, which is in Hindi but subtitled in English and whose viewership has surpassed 3.7 million, can be used as an ancillary international resource to facilitate class discussion on the topical issue of economic sanctions and boycotts. Fair Share laws allow showing the video for non-profit educational purposes in a closed classroom (as opposed to public viewing).² Overall, game theory application to the Russian invasion of Ukraine and Rathee's video on the boycott of Chinese goods, allow for addressing topical issues in international economics and trade, and appeal to student interests.

Figure 4: Dhruv Rathee – Why the world must boycott China!



Source: https://www.youtube.com/watch?v=F_0H2TVywRQ

Lesson Plan

Activity: The instructor can use the game in Figure 3 to address the Russian invasion of Ukraine. This can be done after Nash equilibrium is covered in class. Additionally, to insert a break in the lecture, the instructor can show the 15-minute video by Dhruv Rathee on the role of China in the context of debt trap with countries like Sri Lanka that had to give up the Hambantota Port on a 99-year lease. The instructor may have to pause the video at some instances to ensure that students grasp the ideas before moving ahead. The instructor can also ask students to check for bias in the video based on the language used and to be alert in imbibing information from educational YouTube channels. Moreover, the instructor can show other videos where people engaged in a

² See Fair use on YouTube: <https://support.google.com/youtube/answer/9783148?hl=en>

social experiment on trying to live without Made in China goods.³ The game and videos can be followed by class discussions, which the instructor can lead through a series of questions.

Key concepts: The limits of economic sanctions in preventing war; the limits of boycotts; debt trap

Questions for Discussions:

1. What are the limits of economic sanctions and boycotts?

Suggested answer: Economic sanctions have limits if there is no unanimity among the penalizing countries, as in the case of China and India continuing with their economic ties with Russia; individual boycotts (parallel to individual diet and behavior changes) are ineffective on a larger scale where multilateral government responses are required; where colonialism of the past has emerged as an issue in post-colonial discourse, it is important to broaden the conversation by addressing modern equivalents where developing countries fall into a debt trap under emerging powers like China

2. Based on Dhruv Rathee's video, what are some of the tactics used by China in international trade?

Suggested answer: requirements for foreign companies on technology sharing; dumping; currency manipulation; debt trap

Learning outcomes: Student can learn about the limits of economic sanctions and boycotts. They can also learn about the tactics used in international trade. Additionally, they would learn about bias in educational YouTube channels that have a large viewership.

The issue of persistent current account deficits

First year students learn that persistent current account deficits are due to low saving rate relative to investment and not because of greater taste for imported goods and services. This treatment can be complemented with material from the Carbaugh (2013) textbook on international economics for greater detail and nuance. Chapter 10 of this textbook mentions that current account deficits are matched by net capital inflows, which produces jobs for the economy. Moreover, it indicates that current account deficits are problematic only when the borrowing due to net capital inflows is used to finance consumption instead of investment, as it does not boost productivity that would allow to service the debt. Additionally, it brings in geopolitics by expressing the concern that U.S. foreign debt could be problematic if Chinese investors suddenly shift their capital elsewhere or if China uses its large holdings of U.S. securities strategically against American policies that it opposes. The chapter indicates that foreign investors pulling out of the U.S. economy, were U.S. productivity to decline, would lead to a large decline in the dollar and an increase in interest rates, which would make foreign debt problematic. This motivates reducing persistent current account deficits. In this regard, the following standard equations, as adapted and

³ See for instance: What would life be like without any products made in China?

<https://www.youtube.com/watch?v=e1jZ49xv-oU>

elaborated from chapter 10, can be worked out as follows to show how current account deficits can be addressed.

$$Y = C + I + G + NX$$

$$Y - C - G = I + NX$$

$$Y - T - C + T - G = I + NX$$

$$S_{pvt} + T - G = I + NX$$

$$-NX = (G - T) + (I - S_{pvt})$$

where $-NX$ (current account deficits) equate to (net capital inflows).

The final equation indicates that current account deficits can be reduced by either increasing private saving, reducing investment, or reducing the budget deficit. Equivalently, this means lowering expenditures relative to income. However, this is challenging, as the chapter indicates that reducing budget deficits means instituting unpopular tax hikes or cutting back government spending. Moreover, reducing investments is also problematic for it is the key determinant of productivity and living standards. Finally, even tax break policies that stimulate private saving are problematic, as they favor the rich instead of the poor. Overall, complementing the principles analysis with material from the Carbaugh (2013) textbook allows for a richer discussion on one of the pressing contemporary issues in international economics and trade.

Lesson Plan

Activity: Unlike other activities where the instructor shows videos for discussion, directs students to calculate areas of the graph, or asks them to find articles on social media, here the instructor will have to assume a larger role in leading students through the manipulation of the national accounts identity to determine the relation between current account deficits and the policies used to reduce them.

Key concepts: the connection between current account deficits and net capital inflows; the connection with budget deficits; the role of various policies in reducing current account deficits

Questions for Discussions:

1. Should we worry about persistent current account deficits?

Perspective 1: current account deficits go with net capital inflows that allow foreign investment, which is not an issue if economic growth is greater than the interest rate

Perspective 2: jobs are lost in the export sector; corporate profits are siphoned off abroad

2. What are the issues in combating persistent current account deficits?

Suggested answer: current account deficits can be reduced by increasing private saving, reducing investment, or reducing the budget deficit; reducing budget deficits means instituting unpopular tax hikes or cutting back government spending; reducing investment is problematic as it is the key

determinant of productivity and living standard; tax break policies to stimulate private saving favor the rich

Learning outcomes: Students will learn that solutions to pressing economic problems are not straightforward as in the case of combating persistent current account deficits. Additionally, they will learn that there are multiple perspectives on identifying an issue as a problem in the first place.

Concluding remarks

The objective in this paper was to provide a renewed perspective on teaching trade to economics students. The idea was to create a module parallel to that offered by the CORE online textbook that brings microeconomics and macroeconomics concepts together to address the topic comprehensively. Additionally, the objective was to highlight topical issues and to complement the subject material with a couple of videos and game theory exercises to appeal to economics students. The motivation for this renewed approach to teaching trade at both principles and higher levels emerges in the backdrop of the critique of the lecture method, the limits of abstract models in enabling interdisciplinary conversations, and the significance of pluralist perspectives in building critical thinking skills.

This approach was achieved by first reviewing how neoclassical and heterodox textbooks address free trade and tabulating the differences on key themes including the Ricardian model on trade. This comparative outlook showcases diverse perspectives on trade. Following this, a nuanced perspective on tariffs was presented, where the standard treatment on tariffs was complemented by showcasing how by relaxing the assumption of full employment and by considering the case of a foreign monopoly, tariffs can be justified as welfare enhancing under certain circumstances. Topical issues of fair trade and game theory applications on environmental sustainability and economic sanctions were also considered. Such topics are not usually covered at the principles level but are significant in providing a real-world perspective and appealing to student interests. Finally, the topic of persistent current accounts deficits was addressed to showcase the challenges of addressing them.

In presenting the various topical issues, material was simplified and adapted from textbooks that are usually used for elective courses in international trade and international finance. Other instructors can make use of the approach developed in this paper, as a whole or selectively based on the mathematics preparation level and interests of their student cohort. Additionally, they can focus on a few topics at the principles level given time constraints or consider multiple topics in an intermediate level special-topics class. Overall, by collecting material from various textbooks, adopting pluralist perspectives, providing exercises in graphical analysis and game theory for active learning, highlighting topical issues, and by complementing the subject material with YouTube videos, a renewed perspective on teaching trade is effectively presented.

References

- Becker, W. 2000. "Teaching Economics in the 21st century." *Journal of Economics Perspectives*, 14(1): 109-119.
- Becker, W., & M. Watts. 1996. "Chalk and Talk: A National Survey on Teaching Undergraduate Economics." *American Economic Review*, 86(2): 448-453.
- Becker, W., and M. Watts. 2001. "Teaching Economics at the start of the 21st century: Still Chalk and Talk." *American Economic Review*, 91(2): 446-451.
- Bowles, S. and W. Carlin. 2020. "What students learn in Economics 101: Time for a change."

- Journal of Economic Literature*, 58(1): 176-214.
- Carbaugh, R.J. 2013. *International Economics*. 14th ed. Mason, Ohio: South-Western, Cengage Learning.
- CORE: The Economy. “Capstone: The nation and the world economy.” <https://www.core-econ.org/the-economy/book/text/0-3-contents.html> > Accessed 27 September 2022.
- Dragusanu, R., D. Giovannucci, and N. Nunn. 2014. “The Economics of Fair Trade.” *Journal of Economic Perspectives*, 28(3): 217-236.
- Earle, J., C. Moran, and Z. Ward-Perkins. 2017. *The Econocracy*. Manchester: Manchester University Press.
- Earle, E., M. Perez-Rocha, and S. Sinclair. 2019. “Beyond NAFTA 2.0.” Canadian Centre for Policy Alternatives, Rosa Luxemburg Stiftung, and Institute for Policy Studies. <https://policyalternatives.ca/publications/reports/beyond-nafta-20> > Accessed 27 September 2022.
- Feenstra, R.C., and A.M. Taylor. 2014. *International Economics*. 3rd ed. New York: Worth Publishers.
- Gassler, R.S. 2020. “The global economy: A framework for teachers of microeconomics.” *International Journal of Pluralism and Economics Education*, 11(4): 309-325.
- Geerling, W., J.J. Wooten, G.D. Mateer, and F. Gabriele. 2021. “Breaking down the language barrier: Using pop culture from across the globe to teach microeconomics.” *Journal for Economic Educators*, 21(2): 1-20.
- Goodwin, M. 2014. “What is our child learning? Or, Greg Mankiw and the terrible, horrible, no-good, very bad textbook (now with single-page goodness!)” *Economix*. November 19. <https://economixcomix.com/2014/11/19/what-is-our-children-learning-or-greg-mankiw-and-the-terrible-horrible-no-good-very-bad-textbook/> > Accessed 27 September 2022.
- Hodgson, G.M. 2019. *Is There a Future for Heterodox Economics*. Cheltenham and Northampton: Edward Elgar.
- Jahangir, J. 2020. “Teaching ECON 101 Pairing the Mankiw and Komlos texts.” *International Journal of Pluralism and Economics Education*, 11(4): 359-374.
- Komlos, J. 2019. *Foundations of Real-World Economics: What every Economics student needs to know*. 2nd ed. New York: Routledge.
- Krugman, P. 1993. “What do undergrads need to know about trade?” *American Economic Review*, 83(2): 23-26.
- Krugman, P., R. Wells, I. Au, and J. Parkinson. 2018. *Macroeconomics*. 3rd Canadian ed. New York: Worth Publishers.
- Krugman, P. 2020. *Arguing with Zombies*. New York: W.W. Norton and Company.
- Mankiw, N.G., R.D. Kneebone, and K.J. McKenzie. 2020a. *Principles of Microeconomics*. 8th Canadian ed. Canada: Nelson.
- Mankiw, N.G., R.D. Kneebone, and K.J. McKenzie. 2020b. *Principles of Macroeconomics*. 8th Canadian ed. Canada: Nelson.
- Networks. 2014. “Game theory in the Crimean crisis.” Course blog for INFO 2040/CS 2850/ECON 2040/SOC 2090, Cornell University. September 14. <https://blogs.cornell.edu/info2040/2014/09/14/game-theory-in-the-crimean-crisis/> > Accessed 27 September 2022.
- O’Donnell, R. 2010. “Economic pluralism and skill formation.” In R. Garnett, E.K. Olsen and M. Starr (Eds), *Economic Pluralism*. New York: Routledge, 262–277.

- Ragan, C.T.S. 2020. *Microeconomics*. 16th ed. Canadian ed. Canada: Pearson.
- Rathee, D. 2020. "Why the world must boycott China!" Dhruv Rathee YouTube channel. June 18. <https://www.youtube.com/watch?v=F_0H2TVywRQ> Accessed 27 September 2022.
- Reardon, J., M.A. Madi and M.S. Cato. 2018. *Introducing a New Economics*. London: Pluto Press.
- Skidelsky, R. 2020. *What's Wrong with Economics*. New Haven: Yale University Press.
- Strow, B.K., and C.W. Strow. 2004. "Illustrating trade in the classroom: How free trade can create wealth and decrease hunger, literally." *Journal of Economics and Finance Education*, 3(2): 41-46.
- Weber, C.E. 2007. "Gains from trade for nonmaterialists, environmentalists, and the overworked." *Journal of Economic Education*, 38(4): 452-460.