

Todorova, Tamara; Ramachandran, Bharath

Conference Paper — Manuscript Version (Preprint)

Critical Thinking and the Study of Economics

Suggested Citation: Todorova, Tamara; Ramachandran, Bharath (2005) : Critical Thinking and the Study of Economics, Conference on Quality Teaching for Quality Learning: Education for Critical Thinking, Kluj, Romania, May 6-8, 2005, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

This Version is available at:

<http://hdl.handle.net/10419/148647>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

PAPER FOR CONFERENCE ON QUALITY TEACHING FOR QUALITY LEARNING:
EDUCATION FOR CRITICAL THINKING

T. Todorova and R. Bharath
Assistant Professor Professor, Business
Economics

C/o Faculty Office
American University in Bulgaria
2700 Blagoevgrad Bulgaria

Title: Critical Thinking and the Study of Economics

Introduction

It has long been recognized that the principal aim of learning economics is to learn to think critically. As the great economist John Maynard Keynes put it: “The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique for thinking, which helps its possessor to draw correct conclusions.” Our paper is aimed at illustrating how the study of economics promotes critical thinking. We will also give some illustrative examples how nuanced thinking in economics leads to some counter-intuitive conclusions which are quite important and significant.

The Economist as a Critical Thinker

Since economics is a real life experience, ordinary persons generally perceive it as an area of established rules and generic truths all known to them. People think they know the subject. Its study is rather boring to the ignorant ones who believe they understand enough since they are confronted with it in everyday economic decision making. How much effort to invest in the factory, bargaining on one’s salary, paying one’s bills and shopping for necessities are decisions made by individuals on a regular basis which leaves them with the conviction they know a lot about economics. Misperceptions seem to dominate the realm of individual knowledge of the economic subject.

Critical thinking comes to our aid. It is crucial to the area as it allows disproving many of the misperceptions allowing people to comprehend the concepts and principles by which the economic system truly works. It helps disarm people of their preconceived prejudices about economic decisions. Things that have seemed so obvious are no longer true; the not so obvious becomes obvious.

Critical thinking in economic education has a greater role – it has to prepare young people to think like economists, to subject every phenomenon in the economic system to a thorough study and not take anything for granted. It is worth mentioning that dogmatic thinking is utterly inappropriate for economics. Clichés are especially dangerous in

economic theory and, most importantly, in economic policy making. Doing as others do is not always the best strategy, thinking as others think is not always optimal. An example is the process of privatization in Eastern Europe. The former Bulgarian minister of the economy Nikolay Vassilev, for instance, believed that privatization should occur in all sectors of the economy, at any rate and without any exception.¹ A similar issue arose in transitional Russia where Anatoly Chubais privatized aggressively. “I did not speak, I privatized,” says he describing the period from 1992 to 1994, in which he was a privatization minister². Scholars like Janos Kornai questioned this approach comparing the mass privatization with the once forceful “mass collectivization.” They have argued for a gradual and cautious privatization in Eastern Europe. Further on Kornai attributes the emergence of powerful oligarchs in Russian economy to this abrupt and unquestioned way of privatizing.³

The aim of the paper is not to study the economic way of thinking. Numerous papers and books written by prominent economists meticulously try to explain how economists think, what is at the core of their thought processes that determines the nature of economics as a subject. Hence, the paper does not study the rational man with his optimal choice, with his behavior once confronted with the problem of scarcity and resource allocation. Neither does it study the man of cost-benefit analysis, the one of logical considerations, honest in his conclusions but free from emotional prejudice⁴.

It studies the thinking man, the one who adds creativity, intuition and insightfulness to the process of investigating the economic world. It studies the logical man, the one of imagination who can combine various ideas and innovative processes into a coherent theory or piece of knowledge unobserved by others. It studies the observing man, the man of reality who investigates the economic system and does not feel comfortable having no explanations about some of its principles or elements. It studies the interrogating man, who consistently asks questions about why things are the way they are or how they evolve that way.

According to Susan Feiner and Bruce Roberts critical thinking is an important pedagogical tool as it is “the exercise of higher-order cognitive skills: rather than “define,” “list,” and “solve,” critical thinking tasks include “interpret,” “criticize,” and “evaluate.”⁵ To the two scholars critical thinking is the ability of students “to confront competing theories.” It refers to the more complex levels of understanding; it is inherently comparative and self-consciously value-laden.

¹ Private conversation of the Minister with one of the authors, American University in Bulgaria, 2004.

² Lecture to the Carnegie Endowment in Washington DC, May, 1999

³ Kornai, J. “Ten Years after “The Road to a Free Economy: The Author’s Self-evaluation,” paper for WB “Annual Bank Conference on Development Economics – ABCDE”, April 18-20, 2000, Washington DC

⁴ Walters, K. “Critical Thinking, Rationality, and the Vulcanization of Students,” *The Journal of Higher Education*, Vol. 61, No. 4, 1990, pp. 448-467

⁵ Feiner, S., B. Roberts, “Using Alternative Paradigms to Teach about Race and Gender: A Critical Thinking Approach to Introductory Economics,” *The American Economic Review*, Vol. 85, No. 2, Papers and Proceedings of the Hundredth and Seventh Annual Meeting of the American Economic Association, Washington DC, 1995, pp. 367-371

One can conclude that good economists are creative, critical thinkers. They are disbelievers who don't take the general truisms of their time. They subject every little idea to scrutiny. They do not distinguish between "small" ideas and "big" ideas. They see things that others do not see or they see them differently. Economists, in general, see far beyond others. As it turns out, economics is a complex, multidisciplinary area that requires the knowledge of mathematics, logic, psychology, philosophy, etc. Businessmen in calculating their profits use what is known as accounting profits⁶. They never consider profits or revenues forgone from activities they did not undertake. Economists have introduced the notion of economic profits, rather than accounting profits, using the popular concept of opportunity costs. This is a typical example of the broad nature of the economic mind, the expanded, global mentality economists have.

Critically thinking economists stay in touch with reality – they observe the real world and very often come from professions such as business, law, education, etc. David Ricardo was a profitable capitalist when he decided to devote himself to academic writing. Ronald Coase⁷, previously a law student, formulated his famous theory of the nature of the firm after a several-month trip to the US where he was sent with a student project on US businesses. This shows that brilliant economists spend little time in their studies, but enjoy observing the marketplace or the firm, studying the economics of real life.

Critically thinking economists are disbelievers. They don't follow the stream and subject everything to questioning. They constantly ask questions "what, why, how." They, generally, do not take things for granted and search the truth on their own.

An example was David Hume who lived at the time of mercantilism. Quite an influential economic school that still has roots in contemporary neo-mercantilism and protectionism, the mercantilists in 17th century Britain believed that a country should strive to realize a positive trade balance, as foreign trade is the source of all wealth. They maintained that, if indebted to foreign neighbors, the country would soon be impoverished losing all of its gold to its creditors. Thomas Man, a mercantilist, said: "The ordinary means therefore to increase our wealth and treasure is by foreign trade, wherein we must ever observe this rule: to sell more to strangers yearly than we consume of theirs in value."⁸ The positive trade balance of a country according to mercantilists insured the stability of its economy, enough gold reserves for creating new coins, a strong navy and new rich colonies.

A powerful philosopher and a predecessor to Adam Smith, David Hume refuted this argument with what is known as the price-specie-flow mechanism by which the balance of payment between two countries would automatically regulate itself without having the harmful effects predicted by the mercantilists. According to him the indebtedness of the

⁶ It should not be assumed that all businessmen fail in their decision-making not knowing major economic concepts or having no prior education in economics. For example, it is often said that marginal analysis is an empty subject without much practical meaning, as businessmen have not studied it. Real life refutes this perception – many successful businessmen in their pricing strategies have set the optimal point of production at marginal revenue equal to marginal cost by trial and error.

⁷ A Nobel Prize winner for 1991.

⁸ Krugman, P. and M. Obstfeld, *International Economics: Theory and Policy*, 6th edition, 2003, Addison-Wesley, p. 540

country would lead to low domestic prices, which would stimulate the exports of the country and would decrease its imports. Thus, the trade balance would be automatically adjusted without the need for protectionism. Furthermore, he stressed the productive capacity of the economy as the nation's main source of wealth. His innovative approach to the study of the economic system allowed him to reject a view so deeply rooted in the mindset of mercantilists and laid the foundation of the classical school of Smith and Ricardo.

International trade theory gives one more example of disbelieving by powerful thinkers - Wassily Leontief⁹. A wonder-child, he finished Leningrad University at the age of 14. He fled from the Soviet Union to become one of the most prolific economists of the West with his input-output matrix model, the L-shaped isoquants and Leontief's paradox. The latter is a refutation to traditional factor-endowment theory developed in the beginning of 20th century by the Swedish economists Eli Heckscher and Bertil Ohlin¹⁰. They believed, following Smith and Ricardo, that countries would specialize in the production of goods for which they had abundant resources and would import goods in which their factor endowment is relatively poor. Thus, factor endowment would determine comparative advantage and the pattern of trade. The two prominent economists developed the model graphically, using specific examples of North-South trade. According to their model one would expect a country like the US to export capital-intensive goods and import labor-intensive goods.

Wassily Leontief decided to apply his input-output model to empirically test the model in the case of the US.¹¹ To his surprise and contrary to theory, US exports were labor-intensive while US imports were capital-intensive, a result known as the Leontief paradox. While the paradox disappeared in the 1970s, it has reappeared lately although US workers clearly work with more capital per person than workers around the world. The paradox, still, has not found its compelling explanation and confirms that trade does not always occur in the direction predicted by Heckscher-Ohlin theory.¹²

In the area of macroeconomics and monetary theory one disbeliever is Milton Friedman.¹³ While Keynes, the father of macroeconomics, maintained that monetary policy could be used effectively to stimulate the economy, except when there is a deep recession, Friedman opposed this view. He argued that the only effect of a change in money supply would be on the price level, not on real output. He made an additional assumption - that velocity is constant arriving at:

$$M\bar{V} = PY \quad \text{(equation of exchange)}$$

⁹ A Nobel Prize winner in 1973.

¹⁰ Ohlin, B. *Interregional and International Trade*. Cambridge: Harvard University Press, 1993

¹¹ Leontief, W. "Domestic Production and Foreign Trade: The American Capital Position Re-examined," *Proceedings of the American Philosophical Society* 97 (1953), pp. 331-349

¹² Krugman, P. and M. Obstfeld, *International Economics: Theory and Policy*, 6th edition, 2003, Addison-Wesley, p. 82-84

¹³ A Nobel Prize winner for 1976.

where M is money supply, V is velocity of money (constant), P is the price level, and Y is the real output in the economy. While velocity has been relatively constant for some time, it has become relatively volatile after 1980¹⁴. This partly questions Friedman's monetarist theory but, nevertheless, the theory remains one of the most credible in monetary economics and an expression of a critical and independent way of thinking.

We would now like to conclude by giving a couple of more specific examples of the effectiveness of critical thinking in economics.

The water diamond paradox

One of the classical problems of economics is the "water diamond paradox" first propounded by Adam Smith, the person often considered the founder of modern economic theory. In his *Wealth of Nations* he wrote:

"The things which have the greatest value in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use.

Nothing is more useful than water, but it will scarce purchase any thing: scarce anything can be had in exchange for it. A diamond, on the contrary, has scarce any value in use; but a very great quantity of goods can be had in exchange for it¹⁵

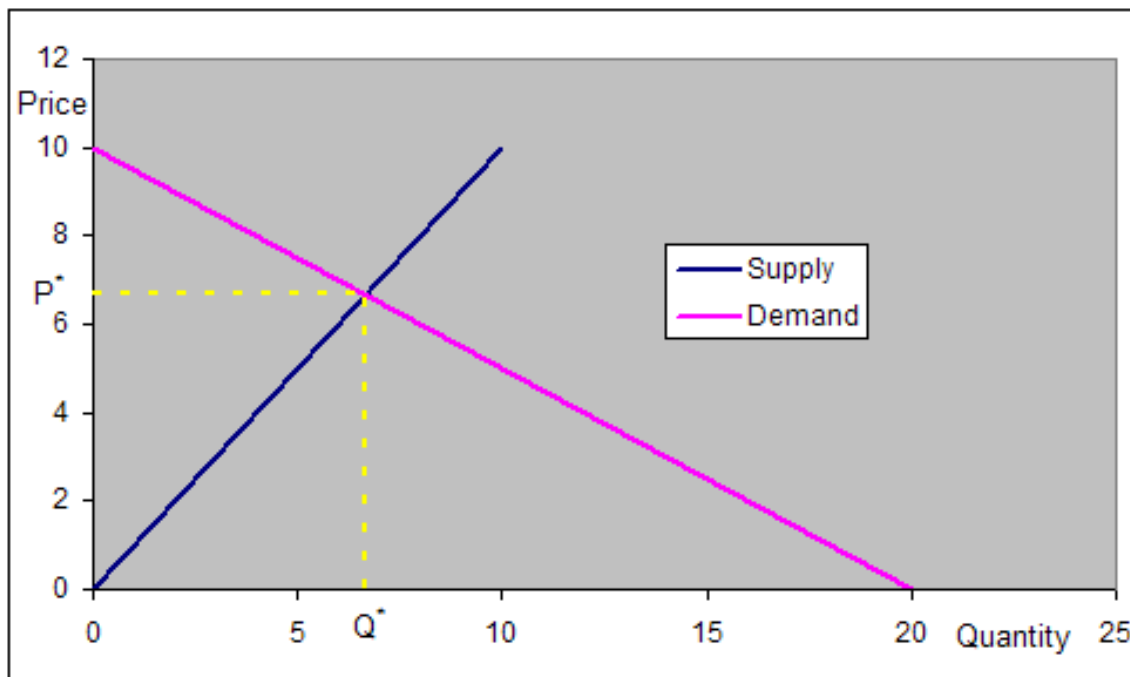
(1) Smith, Adam: *The Wealth of Nations* (1776), Book One, Chapter IV.

The way this paradox was satisfactorily explained at a much later stage in the evolution of economic thought is a good illustration of how critical thinking about what exactly determines the price one is willing to pay for something is essential in understanding properly the role of prices in the water-diamond situation. The resolution of the paradox depended on the development a century later of the concepts of how demand, or the quantity a person is willing to pay, and supply, the quantities that would be available at different prices, interact to determine the price which is finally paid. The famous concepts of demand curves postulate that for the first small quantity, say the first small quantity of water a person needs to survive, he or she would be willing to pay a high price. But for further quantities, the person would be willing to pay less and less, leading to the "downward sloping demand curve" as in the diagram below. But this is by no means the whole story. The quantity made available by suppliers would be more at higher prices, leading to the "upward sloping supply curve" shown below. The final price paid depends on where these two match.

¹⁴ Stiglitz, J. *Economics*, 2nd edition, W&W Norton Company, 1997, pp. 756-759

¹⁵ Smith, Adam. *The Wealth of Nations*. Book I, Chapter IV. 1776.

Supply and Demand



On this graph, there is only one price level at which quantity demanded is in balance with the quantity supplied, and that price is the point at which the supply and demand curves cross.

The great British economist Alfred Marshall, who was principally the architect of this analysis, aptly described this as follows:

“We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production.”

Based on this understanding of how prices are determined, one can resolve the water diamond paradox. At least in Adam Smith’s time, the supply of water was so plentiful even at very low prices, so the stable price of water even for high demand was quite low. On the contrary, the supply of diamonds was small even at high prices, and the demand for diamonds is so small that a buyer is willing to pay a high price for that small quantity and as a result the final price of diamonds is quite high. This is we think an example of how the study of economics promotes the habit of careful and critical thinking in resolving an apparent paradox.

The doctrine of comparative advantage

Another famous example of an economic theory that illustrates the value of critical thinking leading to an important counter-intuitive result is the doctrine of comparative advantage developed by the famous British economist David Ricardo. Before him, it was believed that if one country is more efficient than another in the production of all goods, the first country would not gain anything by trading with the second one. But by a brilliant piece of subtle thinking, Ricardo showed that this was not so and that both countries could gain in certain circumstances. Let us look at his beautiful reasoning with an example.

Suppose there are two countries A and B and B is more productive than A in two different goods, G#1 and G#2, in that the number of units produced per hour of each good is more for B than for A as shown in the following table:

	Number of units per hour	
	G#1	G#2
Country A	10	20
Country B	20	60

Ricardo's argument was as follows. It is true that the production per hour is higher in B than in A for both goods, i.e. it has an "absolute advantage" in both. However, country B is also relatively more productive in producing G#2, because it can produce three times as much of G#2 as A can in an hour, whereas it can produce only two times as much per hour of G#1 as A can.

In such a situation, it pays for Country B to specialize in G#2, in which it has this "comparative advantage" and trade with Country A by exchanging G#2 for G#1. The logic of this argument is that for every hour used for producing 20 units of G#1 in country B, 60 units of G#2 have to be foregone. So if it is possible to trade with country A and get anything more than 20 units of G#1 in exchange for 60 units of G#2, it would be worthwhile to do that rather than produce G#1.

Now what about country A? How many units of G#1 would it be willing to exchange for 60 units of G#2? To produce 60 units of G#2 country A would have to spend three hours. If instead they spend those three hours and produce 30 units of G#1 they are in a position to give country B something more than the minimum of 20 units of G#1 which country B would like to have in exchange for 60 units of G#2 and have something left over. This argument shows that both countries benefit if country B specializes in the product in which it has a "comparative advantage" and trades with the other country in the product where it does not have a comparative advantage. We also see that an exchange rate of 20

units of G#1 for 60 units of G#2 will leave B in the same position as they would be if they produced G#1 themselves, with all the benefit going to A, whereas an exchange rate of 30 units of G#1 for 60 units of G#2 will leave A in the same position as if they had produced G#2 themselves, but give all the benefit to B. Any rate of exchange between 20 and 30 units of G#1 for 60 units of G#2 will give some benefit to both the countries.

The argument is indeed subtle and cannot be faulted, yet for a long time it was thought that the country with an advantage in both products could not possibly gain by trade. We offer this as another example of how the study of economics promotes critical thinking and a general honing of the mind.

Conclusion

As we said at the beginning, economists have recognized that one of the major goals in the study of economics is to develop nuanced and subtle thinking, which may often refute “common sense” and lead to counterintuitive results. One of the greatest economists of all time, the British economist Alfred Marshall, put it this way: “...economics is not a body of concrete truth, but an engine for the discovery of concrete truth”.

The same view has been expressed by other eminent economists as well, perhaps most wittily by Joan Robinson, who said :

“The purpose of studying economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists” !.

We hope the arguments and examples given in our paper buttress the case for the study of economics as a discipline which promotes critical thinking.