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Abstract

The central aim of this dissertation is to make an unambiguous international trade policy recommendation for developing countries grounded on rigorous economic theory. As is generally known, trade models featuring increasing returns to scale and imperfect competition have challenged the mainstream case for free trade which is built upon unrealistic assumptions like constant return to scale and perfect competition. In this context, the core contribution of this dissertation is the restatement of the original free-trade case made by the classical political economists Adam Smith and David Ricardo. This restatement is based on the accurate interpretation of Ricardo's famous numerical example in chapter 7 of the *Principles*. The classical case for free trade formulated by Smith and Ricardo neither relies on unrealistic assumptions nor the laissez-faire doctrine. On the contrary, it stipulates that free trade should always be accompanied by public policies that expand the provision of public education, job training, health care and infrastructure. Moreover, a widespread policy change towards free trade should always be implemented gradually, in order to take care of those groups who might be affected in the short run by the increased level of international competition and technological progress. The main conclusion of the dissertation is that free trade – as conceived by classical political economy – is the most suitable international trade policy for developed as well developing countries for achieving sustainable economic growth and development.

Zusammenfassung

Das zentrale Ziel dieser Dissertation ist es, eine internationale Handelspolitik für Entwicklungsländer zu empfehlen, die auf einer rigorosen ökonomischen Theorie beruht. Wie allgemein bekannt ist, haben theoretische Handelsmodelle mit steigenden Skalenerträgen und unvollkommenem Wettbewerb die traditionellen Handelsmodelle mit konstanten Skalenerträgen und vollkommenem Wettbewerb in den letzten Jahren zunehmend verdrängt, und die darauf beruhende These über die generellen Vorteile des Freihandels in Zweifel gezogen. In diesem Zusammenhang besteht der wesentliche Beitrag dieser Dissertation in der Überarbeitung der klassischen Freihandelstheorie, wie sie von den klassischen politischen Ökonomen Adam Smith und David Ricardo ursprünglich formuliert worden ist. Diese Überarbeitung besteht im Wesentlichen in der korrekten Interpretation des berühmten numerischen Beispiels über die komparativen Kostenvorteile von Ricardo in Kapitel 7 seines Buchs *Principles of Political Economy and Taxation*. Die klassische Freihandelstheorie von Smith und Ricardo basiert weder auf unrealistischen theoretischen Annahmen noch auf der Laissez-faire-Doktrin. Beide Ökonomen plädieren dafür, die Freihandelspolitik mit öffentlichen Investitionen in den Bereichen Bildung, Gesundheitsversorgung und Infrastruktur zu ergänzen. Darüber hinaus sollte der Freihandel immer nur schrittweise umgesetzt werden, um jene gesellschaftlichen Gruppen zu schützen, die kurzfristig durch die Intensivierung des internationalen Wettbewerbs und des technologischen Fortschritts negativ betroffen sein könnten. Als wichtigste Schlussfolgerung der Dissertation ist festzuhalten, dass der Freihandel – wie er von der klassischen politischen Ökonomie ursprünglich konzipiert worden ist – die am besten geeignete internationale Handelspolitik zur Erzielung eines nachhaltigen wirtschaftlichen Wachstums ist.

To my family, for their love and support.

A mi familia, por su amor y apoyo.

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List of Abbreviations

CU	Customs Union
CULC	Constant Unitary Labor Costs Model, generally known as the Ricardian model
EMS	European Monetary System
FPET	Factor-Price-Equalization Theorem
FTA	Free Trade Agreement
FTAA	Free Trade Area of the Americas
GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade in Services
HOT	Heckscher-Ohlin Theorem
i.e.	id est (= that is)
IMF	International Monetary Fund
IPP	Intellectual Property Protection
NAFTA	North American Free Trade Agreement
NTT	New Trade Theory
PPF	Production Possibility Frontier
PTA	Preferential Trade Agreement
RTA	Regional Trade Agreement
SDT	Special and Differential Treatment
TRIPS	Trade-Related Aspects of Intellectual Property Rights
WTO	World Trade Organization

Preface

No one who cannot rejoice in the discovery of his own mistakes deserves to be called a scholar.

Donald Foster

When I started to write this doctoral thesis, I could not foresee that it would take me approximately five years to conclude it. Obviously, the objective of making a trade policy recommendation for developing countries based on rigorous economic theory proved to be a more wide-ranging and harder to accomplish task than anticipated.

Although I had been interested in the polemical and contested issue of free trade since my undergraduate studies in Economics at the University of Havana, I hardly considered myself an expert on the subject at the beginning of this project. In the midst of the literature review process it was particularly challenging for me to truly understand the ubiquitous concept of comparative advantage. I was puzzled by the fact that while David Ricardo was often credited in the economic literature as the author of comparative advantage, some well-known economists criticized him for his allegedly erroneous demonstration of this concept.

Furthermore, the case for free trade seemed to rely on theoretic trade models built upon unrealistic assumptions like constant return to scale and perfect competition. These traditional trade models had been challenged by newer trade models featuring increasing returns to scale and imperfect competition.

In addition to the challenge in the academic sphere, the case for free trade seemed to be refuted in the real world as well. Free trade policies were important ingredients of the neoliberal economic reforms implemented throughout Latin America in the 1990s. They were part of a broader laissez faire approach to the economy recommended by the neoliberal agenda, which had produced high social costs among vast sectors of the population in the countries where it had been implemented. How could a trade policy endorsed by the so-called Washington Consensus be in the best interest of developing countries after all?

Not surprisingly, at the beginning of my research I was rather skeptical that a free trade policy could spur economic growth in developing countries. My gradual process of

conversion from a critic to a supporter of free trade started with the discovery of a paper written by Ruffin (2002), which referred to Sraffa's article of 1930. These two articles put forward a different interpretation of the four numbers in the numerical example of chapter 7 of David Ricardo's book *Principles of Political Economy and Taxation*. I immediately realized that it was necessary for me to forget what I had previously read about comparative advantage in the economic textbooks, in order to be able to study without prejudice the insights and implications of the numerical demonstration of comparative advantage in the *Principles*.

While reading the *Principles*, I discovered that for truly understanding Ricardo's propositions on foreign trade, it was indispensable for me to become familiar with Adam Smith's book *An Inquiry into the Nature and Causes of the Wealth of Nations*. This book does not only mark the beginning of the establishment of economics — or political economy, as Smith used to call it — as an independent academic discipline, but also contains the first formulation of a systematic and comprehensive case for free trade in the history of economic thought.

The exhaustive study of these two seminal books and the related literature resulted in the restatement of the classical case for free trade. This restatement proved to be a quite formidable challenge, which explains, along with some personal circumstances, the unusual amount of time that took me to write the dissertation.

Now that the task is accomplished, I would like to thank all those who have assisted me in one way or the other during this process. First I have to thank the Latin American Institute (LAI) in Vienna for granting me a scholarship during four years. I'm particularly indebted to Ana Rosa Camba Santos, who was responsible for coaching the participants of this scholarship program. She and my fellow scholarship holders were like a family to me.

A special thank goes to my tutors, Prof. Joachim Becker and Prof. Andreas Novy, for their valuable comments and admirable patience.

Lastly, I would like to thank my family and friends. Without their encouragement and relentless support during all those years, it would have been impossible for me to accomplish the task. I hope that life gives me the opportunity to express my sincere gratitude to all of them in many different ways.

Finally, I am also indebted to those scholars — both living and death — who have written about the subject of international trade. Irrespective of the fact that I may agree or disagree with them, I am grateful for their inputs — also for the ones that I have criticized and rejected in this dissertation —, since they have helped me to form my own opinions and thoughts about this interesting and relevant topic.

Vilfredo Pareto once wrote: *“Give me an error any time, full of seeds, bursting with its own corrections. You can keep your sterile truth for yourself.”* I could not agree more with Pareto’s dictum. In this sense, I would certainly prefer that this doctoral thesis be regarded as an original and inspiring sequence of fruitful errors rather than a dull collection of sterile truths.

Introduction

*The best way to become acquainted with a subject is to
write a book about it.*

Benjamin Disraeli

Since the very beginning of the gradual emergence of economics as an independent academic discipline more than two hundred thirty years ago, the overwhelming majority of its practitioners have believed in the virtues of free trade for achieving national economic prosperity. Unfortunately, the economists have not been particularly successful in convincing non-economists that governments should not intervene in the voluntary exchange of commodities and services among countries. The typical layperson is rather skeptical if not frankly opposed to the idea of free trade with foreign countries. As a result, trade policy has become one of those issues where the recommendations of professional economists clash particularly strong with public opinion.

Because of this lack of support outside the economic profession, the free-trade case had failed to gain much traction in the real world of international politics for the most part of the twentieth century. In the last two decades, however, free trade has started to make steady progress in the real world as well. An insurmountable amount of free trade agreements and initiatives have been launched, negotiated and signed throughout the world. Many governments are currently engaged in several multilateral and bilateral free trade negotiations at the same time. Powerful regional trading blocs have emerged, and influential international organizations — like the World Trade Organization (WTO) — have been created with the explicit purpose of advancing the free-trade agenda among its member states. As a consequence of these recent developments, the amount of commodities exchanged internationally has increased to an unprecedented level.

Paradoxically, at the very same moment when the free-trade principle is finally transcending the narrow confines of the academic sphere and making significant advancements in the real world of international trade politics, the once overwhelming support for free trade among economists is starting to decline. A growing number of economists do not regard free trade as a suitable economic policy for achieving long-

term economic growth and development anymore, in particular with respect to developing countries.

As Krugman (1987) points out, the economists' diminishing support for free trade is not the result of renewed political pressures for the implementation of protectionist trade policies, which had prevailed in the past without shaking the intellectual foundations of the free trade case, but because of developments that have taken place in the theory of international trade itself since the 1980s. The traditional constant returns and perfect competition models of international trade — the so-called Ricardian model and Heckscher-Ohlin model — have been supplemented and to some extent supplanted by new trade models that emphasize increasing returns and imperfect competition. These new trade models call into doubt the theoretical accuracy of the free trade recommendations put forward by the traditional trade models, and open up the possibility that government intervention in trade via import restrictions, export subsidies, and so on, may under some circumstances be in the best national interest for developed as well as developing countries after all.

Given the present doubts about the merits of the case for free trade, it seems rather difficult to formulate clear and unambiguous trade policy recommendations to governments. If these doubts cannot be overcome, the steady progress of the free-trade principle in the real world during the last decades might come to a halt or may even be reverted. In that case we may witness a comeback of protectionist trade policies, retaliatory tariffs and trade wars in the near future.

In this context, the present doctoral thesis is set to address the following research question: Is free trade a suitable economic policy for achieving long-term economic growth and development, in particular from the perspective of developing countries?

An unambiguous trade policy recommendation in favor or against free trade has to be founded on solid theoretic foundations for having the slightest chance of being accepted by economists and laypersons with preconceived opinions about the subject. For such an ambitious purpose, the current mainstream international trade theory does not provide a viable basis. Thus, it was necessary to dedicate the bulk of this dissertation to critically review the main concepts and propositions of mainstream international trade theory. The result has been a significant restatement of the free trade case.

The dissertation is divided into five chapters. The first chapter lays out the methodological perspective of the doctoral thesis. According to this methodological perspective, there is not a single and monolithic case for free trade in international trade theory but two competing and mutually exclusive cases: 1) the case for free trade of classical political economy, and 2) the one put forward by the neoclassical school of economic thought, which is currently the mainstream explanatory framework regarding the virtues of free trade.

Chapter Two is dedicated to a restatement of the classical case for free trade, following closely what is actually written in Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* and David Ricardo's *Principles of Political Economy and Taxation*. At the center of this restatement is the accurate interpretation of Ricardo's numerical example in chapter 7 of the *Principles*.

The third chapter contrasts the classical with the neoclassical case for free trade. It starts by pointing out the main points of disruption between the classical and the neoclassical framework. It also contains a critique of the two traditional neoclassical trade models: the so-called Ricardian model and the Heckscher-Ohlin model. The chapter concludes with a brief critique of the welfare concept as the main benchmark put forward by the neoclassical school of economic thought for judging the merits of economic policies.

Chapter Four critically reviews some arguments for protection in the light of the restatement of the classical case for free trade. The arguments for protection were chosen based on their current level of popularity among scholars. The first two arguments — strategic trade policy and external economies — have become increasingly popular in the aftermath of the so-called *New Trade Theory*, which has reincorporated increasing returns to scale to mainstream international trade theory. This development appears to have also injected new life to the infant industry argument, perhaps the oldest and longest-lived specific argument for protection. In the present context of accelerated economic globalization some development economists have proclaimed the ever-greater relevancy of infant-industry protection for developing countries.

Finally, the fifth chapter offers some general recommendations about the practical implementation of a free trade policy, taking into consideration the particular interests

of developing countries. It is followed by the conclusions and recommendations that can be extracted from this doctoral thesis.

As can be inferred from this brief overview of the five chapters, the scope of this dissertation is limited to the analysis of foreign trade theories. Aspects of international finance — like, for example, exchange rate policies and the pros and cons of adopting common currencies —, although relevant for a successful implementation of international trade policies, have been intentionally left out in order to narrow the subject of research. This decision reflects the author's belief that a thoughtful analysis of international finance cannot be accomplish without basing it on a solid economic theory regarding the international exchange of commodities and services. The present doctoral thesis is foremost dedicated to make a contribution in providing such a solid theoretic foundation for analyzing international trade.

1 Methodological Approach

*If you would be a real seeker after truth, it is necessary
that at least once in your life you doubt, as far as possible,
all things.*

Rene Descartes

1.1 On the Concept of Free Trade

In this doctoral thesis, free trade is defined as the trade policy recommendation that national governments should abstain from intervening in the voluntary exchange of commodities and services across political borders between the residents of their respective countries. Under a free-trade regime, national governments do not impose artificial barriers — such as tariffs, quotas, subsidies or nontariff barriers — with the purpose of hampering the importation of specific commodities and services in order to secure their production within national borders.

I have deliberately avoided describing this free-trade policy as *laissez-faire* because this term has also been used to label a general economic doctrine that seeks to minimize or eliminate government intervention in most or all aspects of society, and which I do not support. Free international trade can be described as a policy of non-discrimination with respect to foreign-made commodities and services, without the need to recur to the ambiguous term *laissez-faire*.

The first claims in favor of free international trade were probably made in debates over foreign trade monopolies in the English parliament at the end of the sixteenth century. At that time there was a centuries-old practice of granting exclusive privileges to select merchants so that they could engage in trade with particular regions. In this context, calls for *free trade* — or, more precisely, *freedom to trade* — emerged from an antimonopoly movement that opposed such government restraints on domestic as well as foreign trade. The members of this antimonopoly movement demanded the right of the merchant to carry on trade without government permission or approval. Thus the first *free traders* were calling for the abolition of exclusionary guild regulations and government grants of monopoly rights and privileges, and decidedly not for the elimination of

import tariffs or export subsidies, which is the current demand of modern free-trade advocates (Irwin, 1998, p. 46).

This later claim for free trade is the result of a very different debate and context. With the emergence of modern nation-states in the sixteenth century, governments started to worry about the effects of international competition on the prosperity of national industries. These concerns led to the formulation of the first system of thought regarding international trade called *mercantilism*. According to the mercantilists of the early seventeenth century, the key objective of trade policy was to achieve and preserve a favorable balance of trade with foreign countries on a permanent basis. Trade with another country was judged profitable as long as the value of exports exceeded the value of imports, thereby resulting in a balance-of-trade surplus, which added *wealth* to the export-surplus country in form of precious metals. International trade was seen as a *zero-sum game* — one country's gains were necessarily the other country's loss —, since it is not possible for all countries to achieve a favorable trade balance at the same time. Although dismissed by economists on theoretical and logical grounds, reminiscences of the balance-of-trade doctrine have managed to survive in the minds of the average citizen and many contemporary politicians until the present.

By the end of the seventeenth century mercantilists gradually upgraded the balance-of-trade doctrine, focusing more on the commodity composition of international trade as the principal criterion for determining if foreign exchange was beneficial to the national economy. Followers of this upgraded version of mercantilism essentially argued that the government has to secure that economic activities generating high value-added — or involving extensive processing and manufacturing — are carried out predominantly by resident industries. Because manufacturing activities generated more value at that time, mercantilists recommended that the national economy should be oriented toward importing raw materials and exporting manufactured commodities. Consequently, governments should impose low import duties on inputs and raw materials, and impose high import duties on processed goods (Irwin, 1998, p. 38).

At the first look, this upgraded version mercantilism seems very similar to the balance-of-trade doctrine. For the late-seventeenth-century mercantilists, though, the main advantage of manufacturing was not simply the economic gain from exchanging more valuable processed commodities for less valuable unprocessed goods, but that manufac-

turing was allegedly more capable of generating well-paid jobs. Thus, the underlying purpose of the mercantilists' focus on the commodity composition of trade was to promote economic development by encouraging the expansion of manufacturing and thereby creating more jobs opportunities for the local population. Commercial policy was seen as an important mechanism for directing economic incentives in such a way as to spur economic development. Thus, the notion that protection could secure a higher level of employment and output in manufacturing became the main argument that the free-trade doctrine had to overcome after the mid-seventeenth century (Irwin, 1998, p. 40).

Both of the reasons mercantilist writers set down for regulating trade — to promote a favorable balance of trade and to secure greater manufacturing production —, were derivative of a more general view of international trade where a disharmony between private and public interests necessarily led to a misallocation of economic resources. This misallocation had to be remedied by proper government intervention. In this context, free-trade thought emerged not only to question the particular goals and concerns of mercantilists, but also to confront the general question regarding the proper role of the government in directing the country's economic affairs and its international commerce in particular (Irwin, 1998, p. 44).¹

1.2 The Current Status of Free Trade in Modern Economics

Since the publication of Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* back in 1776, the issue of free trade has enjoyed a unique status among economic thinkers.² For more than two hundred years, the vast majority of economists have believed in the virtues of free international trade in advancing the goal of widely

¹ For a fuller discussion of mercantilist' views, see Irwin (1998).

² John Maynard Keynes, one of the most influential economists of the 20th century, explicitly acknowledged this special status of free trade when he stated in his famous article "National Self-Sufficiency": "*I was brought up, like most Englishmen, to respect free trade not only as an economic doctrine which a rational and instructed person could not doubt but almost as a part of the moral law. I regarded departures from it as being at the same time an imbecility and an outrage. I thought England's unshakable free-trade convictions, maintained for nearly a hundred years, to be both the explanation before man and the justification before heaven of her economic supremacy*" (Keynes, 1933).

shared economic prosperity.³ This professional concurrence in recommending free trade is particularly remarkable since economists have built a solid reputation of disagreeing on almost every other important economic-policy issue. But when it comes to international trade policy, the typical disagreement among economists is supplanted by a widespread support of free trade, with only a few dissenting voices.

This majoritarian support of free trade among economists takes its special meaning from the fact that it is a widely discussed policy issue where the economists' view clashes particularly strong with public opinion. The average citizen usually favors protectionist policies, especially in the specific branch of industry where he or she is currently employed or has invested some capital. The extended support for protectionism among the population creates a special incentive for some economists to turn apostate. In order to neutralize this incentive, some scholars have elevated the adherence to free trade to a *touchstone of professionalism* in economics, a sort of *Economists' Creed*.⁴

Despite the economists' strong commitment to free trade, the level of support for free-trade policies has remained quite low outside the professional ranks. Therefore, the economists' claim for free trade had relatively little impact in the practical world of international trade during most part of the 20th century. In the last two decades, however, the idea of free trade has gained a growing number of supporters from outside the academic circles as well. As a result, numerous free trade agreements and initiatives have been launched, negotiated and signed throughout the world. Many governments are currently engaged in multilateral as well as bilateral free trade negotiations at the same time. Powerful regional trading blocks are emerging, and international trade is rapidly expanding. After more than fifty years of delay, the World Trade Organization (WTO) was finally founded in 1995, and its membership has rapidly risen to 153 states⁵ until the

³ One survey reports that 88 percent of economists questioned in the United States, Austria, France, Germany and Switzerland support or support with qualification the proposition that „tariffs and import quotas reduce general economic welfare“. The highest level of support was achieved in the United States with 95 percent. See Frey et al. (1984).

⁴ See Krugman (1987).

⁵ The number of Member States according to the WTO homepage (www.wto.org) consulted on July 10th 2010.

present. The WTO, together with other international organizations like the World Bank and the International Monetary Fund (IMF), have been promoting a wave of trade liberalization in specific economic sectors throughout the world.

Paradoxically, this recent wave of international trade liberalization has been accompanied by growing doubts about the theoretical case in favor of free trade among those who hitherto had been its most enthusiastic supporters: the economists themselves. These growing doubts and diminishing support for free trade among economists are not the result of renewed political pressures in favor of protectionist policies, which have triumphed in the past without shaking the intellectual foundations of the free-trade theory; they are the result of changes that have taken place within mainstream international trade theory.⁶

Since the 1980s traditional international trade models featuring constant-returns-to-scale and perfect-competition have been gradually supplemented and to some extent supplanted by new theoretic models that emphasizes increasing returns and imperfect competition. These new models of international trade have been amalgamated — presumably for marketing purposes — under the umbrella term *New Trade Theory* (NTT). In addition to the two assumptions already mentioned — increasing returns to scale and imperfect competition —, the NTT-models also have in common a relatively high level of mathematical (=formal) sophistication. The rapid academic success of the NTT-models is due to the fact that they appear to remedy the two central weaknesses of the traditional models of international trade: the unrealistic nature of the assumptions regarding constant return to scale and perfect competition, and the proven inability of the traditional trade models to explain the current pattern of international exchange, which largely consists in intra-industry trade (Krugman, 1987).

Although the NTT-models are usually accompanied by vague trade-policy recommendations — if any at all —, they have managed to seriously shaken the prior consensus in favor of free trade among economists. Krugman, a co-founder and leading advocate of the NTT, summarizes the policy conclusions based on these trade models as followed:

⁶ See, for example, Baldwin (1992).

“Free trade is not passé, but it is an idea that has irretrievably lost its innocence. Its status has shifted from optimum to reasonable rule of thumb. There is still a case for free trade as a good policy, and as a useful target in the practical world of politics, but it can never again be asserted as the policy that economic theory tells us is always right” (Krugman, 1987, p. 132).

According to Krugman, modern economic theory does not provide a solid framework in favor of free trade. The post-NTT case for free trade rests predominantly on political considerations — not on arguments directly derived from economic theory. Therefore, economists cannot justify their support of free trade exclusively on economic arguments anymore, but have to rely predominantly on political arguments like the possibility of retaliation and the unleashing of trade wars.⁷ Nevertheless, a majority of economists, including many *new trade theorists*, continue supporting free international trade, although often in a more cautious and less confident way.

Why hasn’t the NTT led to stronger recommendations against free trade? Kuttner (1991) suggests that the reason behind this suspicious policy-reticence among new trade theorists is their collective fear of being labeled protectionists. Cowardice, though, can hardly be considered as a suitable scientific explanation. In terms of personal virtues and vices, there is no evidence for supposing that economists are different from any other group of people. It is rather save to assume that they have a normal distribution of courage and cowardice. Some economists may indeed be afraid of expressing their views truthfully, while others may be more audacious and outspoken. Excessive cowardice is therefore a very improbable explanation for the general reticence of contemporary economists in formulating bold international trade policies.

Krugman (1992, p. 424) considers Kuttner’s explanation to be grossly unfair, yet — surprisingly — not entirely unjustified. After all, free trade has a special status among economists, and even brash young trade theorists may be hesitant to challenge this tenet directly. Therefore, it is possible to argue that the policy diffidence of new trade theorists is — at least to a certain extent — the result of their unwillingness to challenge the norms of their academic discipline. Nevertheless, Krugman considers that the real rea-

⁷ See, for example, Krugman (1993).

son behind the trade-policy reticence is the “(...) *realistic appreciation of the difficulty of coming up with a solid advice — and of getting it accepted.*”

Krugman’s explanation immediately triggers an interesting question: Why is it apparently so difficult for contemporary economists to come up with a solid advice regarding international trade policy? An in-depth inquiry into this puzzle seems to be even more justified by the fact that the policy reticence of mainstream economists is not limited to the field of international trade, but is also manifest in other branches of economic theory as well. It seems to be a widespread and recurrent syndrome affecting modern economic thought rather than a limited and transitory phenomenon.

The noticeable policy-reticence of many mainstream economists has led to the critique that the economic science has very little to offer in terms of contributing to solve the obtrusive socioeconomic problems of our time; that it is not even concerned with these problems any more.⁸ In short, that economics has become an irrelevant science.⁹ The critics insist that scientific research in general should be oriented towards solving significant problems, that is, the ones whose solution will most benefit the society. Economic research is meant to be useful. By contrast, a majority of today’s economic researchers often give the impression of engaging in economics research following the slogan *l’art pour l’art* (art for art’s sake).¹⁰ Nowadays, vast intellectual and material re-

⁸ See Galbraight (1973, p. 2). Referring to the textbooks of the 1970s, Morgenstern (1972, p. 1163) claim that few if any unresolved theoretical problems are mentioned. Unresolved problems simply do not seem to exist. Present-day economics contributes so little that is new or useful towards solving the practical troubles of the world.

⁹ Among the many critics there are also some leading professional economists — not only outsiders or intellectual mavericks. It is not the purpose of this section to present a summarized review of all the critical points raised, but to rather indentify and concentrate on the roots of the problem. The following sample just indicates the range and variety of the critique. It is said that: the empirical foundations of economics are inadequate (Leontief, 1971); there has been a scandalous waste of intellectual resources in the overdevelopment of mathematical economics and econometrics (Hahn, 1970); many of the economists’ efforts are irrelevant (Worswick, 1972) and contribute little or nothing of value to the solution of major practical problems (Morgenstern, 1972); and the profession generally maintains a perverse reward system (Blackman, 1971). For a contrary assessment, see Heller (1975).

¹⁰ Phelps (1972), for example, denounces the smallness of the contribution that the most conspicuous developments of economics in the last quarter of a century have made to the solution of the most pressing problems of our times.

sources available in the countless economic departments of universities and research institutions throughout the world are being misallocated into solving arid theoretic puzzles, providing sterile proofs and practicing recreational mathematics while the world's pressing economic and social problems go begging for answers. It is somehow ironic — and rather tragic for the great part of humanity currently living in poverty — that the practitioners of a science that is supposed to be dealing with issues of allocative efficiency are currently showing such an ineffective allocation of their own intellectual and material resources.

Surprisingly, many mainstream economists do not even deny the existence of such a policy-reticence in contemporary economic thought; instead, they prefer to turn vice into virtue by declaring that as scientific researchers they have to deal first and foremost with *positive* economics rather than with *normative* economics. The next section will be dedicated to analyze this peculiar and often-heard excuse.

1.3 Positive vs. Normative Economics

The proposed distinction between positive and normative economics was originally understood as a dividing line between the “scientific” description of the functioning of the economic system and the prognostication — as far as possible — of its future development, on the one hand, and the practical advice on economic policy on the other. In the latter half of the nineteenth century this distinction between scientific theory and practical economic policy issues became increasingly entangled and almost completely identified with the dichotomy between facts (“is”) and values (“ought”), i.e., between supposedly objective and accurate statements about the functioning of the economic system and prescriptive evaluations of it. Positive economics was now said to be about facts and normative economics about values (Blaug, 1993, p. 112).¹¹

¹¹ According to Friedman (1966), positive economics has to do with “what is”, while normative economics has to do with “what ought to be”. Positive economics is a social science, and as such is subject to the same checks on the basis of evidence as any science. By contrast, normative economics has a moral or ethical aspect, and as such goes beyond what a science can say.

How is it possible to distinguish between an *is*- and an *ought*-statement? An *is*-statement is simply one that is either materially true or false: it asserts something about the state of the world and we can employ interpersonally testable methods to discover whether it is true or false. An *ought*-statement, on the other hand, expresses an evaluation of the state of the world — it approves or disapproves, it praises or condemns, it extols or deplors — and we can only employ arguments to persuade others to accept it (Blaug, 1993, p. 113).

Those who make such a strict distinction between positive and normative economics usually claim that economists should be primarily concerned with positive economics, since as long as they limit themselves to the explanation and prediction of economic phenomena, they may reach conclusions that will command universal acceptance as soon as they are properly understood. If an economist dares to cross the scientific Rubicon and starts to prescribe principles of economic policy, though, he or she cannot aspire to general acceptance anymore. Since economic policy prescriptions necessarily depend upon a scale of social values, economists who profess different social values may judge these prescriptions differently.

Positivist economists also believe that they are not even entitled to set the main goals of economic policy, and that the goal-setting task should be left to democratically elected politicians. Only after these politicians, presumably representing the will of the majority of the population, have set the main economic policy goals, economists should start thinking about the best way to accomplish them.

Such a passive view of the economists' role in setting the main goals of economic policy is based on the premise that economists cannot agree on the proper goals, but they may agree on the suitable tool(s) — essentially the so-called *free market* — to accomplish them. This underlying supposition, though, is flatly wrong. In the real world the level of agreement among economists regarding desirable goals is usually much higher compared to the level of agreement regarding the proper means to achieve them. In other words, it is easier to build consensus about goals and values than about the proper means for their practical realization. The eradication of absolute poverty, a highly educated and healthy population, a clean environment, a low level of unemployment and inflation, the avoidance of huge budget deficits — the majority of economists would agree that these are valuable and desirable economic-policy objectives. They may even agree about the

relative importance of these specific goals, although this is less certain. Where they will most certainly disagree is about the proper means to achieve them. A consensus regarding the relative importance of specific economic policy goals, as well as the proper means to accomplish them, presupposes an accurate and uniform economic theory about the functioning of the current economic system, which does not exist in contemporary economic thought.

Positivist economists have put considerable effort in presenting themselves as objective and impartial scientists. Consequently, they have tried to avoid getting involved into the arid political debates that accompany any major economic policy issue.¹² This scientific masquerade allowed positivist economists to dismiss anyone who questioned the scientific objectivity of their economic theories as being mistaken or representing some nefarious special interest.

Mainstream economists like to present the distinction between positive and normative economics — or economic theory versus policy and facts versus values — as a natural and necessary feature of their science. As a matter of fact, though, this distinction is a peculiar attribute of a specific school of economic thought — neoclassical economics. It is quite revealing to acknowledge the fact that the founders of the economic science did not conceive the above distinctions as dichotomies. These pioneers always defined the objective of the nascent academic discipline as twofold: (1) to explain and interpret the functioning and evolution of the economic system; and (2) to advise and guide the formulation of economic policy according to the sound principles of po-

¹² The positivists' quest for adopting a scientific pose may be symbolized by the gradual substitution of the traditional term "political economy" for the modern term "economics" in English speaking countries during the late nineteenth century. Originally, scientists who theorized about the economy used to call themselves *political economists*. Marshall and his wife explained in their *Economics of Industry* the proposed change of denomination by arguing that it would be better to drop "political" from the traditional denomination since "political interests generally mean the interest of some part or parts of the nation" rather than the nation as a whole (Marshall and Marshall, 1879, p. 2). A brief etymological analysis of the term *political economy* proves the superficiality of the adduced reason for rebranding the science. The Greek term *oikonomia* originally meant household management. The original intention behind the addition of the word *political* — derived of course from the Greek word for city, *polis* — in front of "economy" was to distinguish the rules of state management from those of household management. For a historic analysis of the term *political economy*, see Arndt (1984).

litical economy. Adam Smith, who many consider as the founding father of economics, explicitly defines the general purpose of the scientific discipline in the *Wealth of Nations* as followed:

“Political economy, considered as a branch of the science of a statesman or legislator, proposes two distinct objects; first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the publick services. It proposes to enrich both the people and the sovereign” (*WN*, IV.intro.1).

According to Smith, political economy naturally includes theoretical analysis as well as policy prescriptions, positive as well as normative economics. Effective economic policies have to be supported by accurate and comprehensible theories on the production and distribution of wealth or, what to Smith was the same thing, an insightful understanding of the operations of the economy. The objective of the classical political economists was always to explain how a modern capitalist system actually works, and how it ought to work.

One may enquire whether Smith’s economic analyses necessarily led him to his public policy statements, or, to the contrary, whether his public policy proclivities led him to his economic theory. The first view suggests a pure scientific vision or idealization of how a social scientist works: he or she develops the economic theory first and then reaches the public policy conclusions that are logically implied by the theory. In the second scenario, Smith would have had at the outset a relatively clear idea of the role that he thought government should have in modern capitalist societies. He then would work backwards to find a theory that would justify his public policy announcements. This would be a pure ideological view upon which economic theories are developed to back certain ideological positions. Stated this way, though, the issue is wrongly posed. Smith was not an ideologue who simply developed an economic theory to back his political beliefs. Yet neither was he simply a pure scientist who logically developed policy implications from a disinterested abstract theoretical model. Here, as with all the great economic theorists, there is a dialectical interaction between the economic theories that are constructed and the role that the theorist envisions government should play in mod-

ern societies.¹³ The public policy statements that Smith advocates and the technical economic theories he elaborates are tightly interwoven and interconnected.¹⁴ It is not clear which came first for Smith: economic theory or public policy. Yet Smith, great political economist that he was, begins his story by prefacing his policy pronouncements with economic theory (Pack, 1991, pp. 10-11).

Contemporary followers of the classical school of economic thought like Nobel laureate economist Amartya Sen have continued the tradition of rejecting the sharp fact/value distinction and the supposed meaninglessness of value claims.¹⁵ During the 1960s he presented a sophisticated defense of his claim that reasoned arguments in economics could also contain an ethical component (Sen, 1967, pp. 46-62). He developed a complex taxonomy of different classes of the uses of ethical words in ordinary language, analyzing their respective openness to rational argument, in order to refute Lord Robbins' well-known opposite opinion.¹⁶

An economic science oriented towards solving real socioeconomic problems does not preclude research on the proving of theorems and propositions derived from abstract models, which, at the first look, seem to have little resemblance with economic reality. Economic research sometimes consists of work that is designed solely to advance theoretical or econometric technique. Nevertheless, all this research work is supposed to be geared to the dual task of enabling a better understanding of an economic system and thereby determining how desired socioeconomic results might be accomplished. The ultimate goal of any economic research should always be the elaboration of better and more effective economic policies (Eatwell, 1994).

The supposed dichotomy between positive and normative economics is little more than an attempt to distract from the central problem of contemporary economic thought: the growing inability of mainstream economic theory to describe the real functioning of the economy. The lack of real progress in economic research and scarce

¹³ See Heilbroner (1999); Dobb (1973); and Galbraith (1987).

¹⁴ See Heilbroner (1985).

¹⁵ See Sen (1987, p. 31).

¹⁶ See Robbins (1949, p. 132).

relevance of the output in the last decades is a mere symptom and necessary consequence of this central problem.¹⁷ The next section will be dedicated to analyze the causes for the increasing abyss between economics and its subject of study.

1.4 Mathematical vs. Literary Economics

As far as the laws of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality.

Albert Einstein

Some economists have attributed the growing difficulty in understanding and describing the real functioning of the economy to the excessive use of mathematics in modern economic theory, or what Beed and Kane (1991) have termed the *mathematization* of economics.¹⁸ In this context, the *mathematization* of economics apparently means employing mathematical techniques beyond simple arithmetic and algebra, such as matrix algebra, integral calculus or differential equations.

The critical comments regarding the allegedly excessive deployment of mathematical language and tools in the economic science have already transcended the ranks of non-mainstream economists — the usual suspects — to become itself a trendy phenomenon.¹⁹ Nowadays any economist can take a bold stance against the *excesses* of mathematical economics without the fear of being immediately stigmatized as a *literary economist*, the usual stigma reserved for early critics of mathematization. On the contrary, they can quote prominent mainstream economists — including some Nobel laureates

¹⁷ See, for example, Blaug (1993, p. 238): “*The central weakness of modern economics has been the reluctance to produce theories that yield unambiguously refutable implications, followed by a general unwillingness to confront those implications with the real world.*”

¹⁸ Blaug (1993, pp. 4-5) writes about this point: “*Modern economics is sick; economics has increasingly become an intellectual game played for its own sake and not for its practical consequences; economists have gradually converted the subject into a sort of Social Mathematics in which analytical rigour as understood in math departments is everything and empirical relevance (as understood in physics departments) is nothing; if a topic cannot be tackled by formal modelling, it is simply consigned to the intellectual underworld.*”

¹⁹ For an interesting empirical study about how economic students are trained in the mathematical techniques, see Klammer & Colander (1987, 1990).

— who express similar concerns on the path taken by modern economic theory during the last decades.²⁰

The proposed remedies for the *excesses of mathematization* cover a wide spectrum, from timid recommendations about the proper use of mathematical tools to a complete ban of mathematics from economic theory. Before evaluating the effectiveness of the proposed remedies, however, one has to critically appraise if the problem has been correctly identified in the first place.

Blaming mathematics for the current deficits of mainstream economic theory seems at least questionable when one considers the crucial contributions that logical reasoning and mathematical techniques have made in other scientific disciplines. The spectacular scientific advancements in physics and chemistry during the past two centuries, for example, are unconceivable without the deployment of applied mathematics, both for the statistical evaluation of observations and for the deduction and verification of the theoretical propositions themselves. Throughout history, logical thinking and applied mathematics have promoted progress in natural and social sciences. Therefore, mathematics should be regarded in principle as a valid and useful tool of research and form of expression in every scientific discipline, including economics.

When deploying logical concepts and applied mathematics in economic research, though, economists should always bear in mind the different meaning of the word *truth* in logical-mathematical and in real sciences. In the logical-mathematical sciences, *truth* is essentially a logical criterion; it means merely logical implication and nothing else. A conclusion is considered to be “true” if it follows from the premise(s) by means of logi-

²⁰ Take, for example, the self-critique of British economist and Nobel laureate Sir John R. Hicks during an interview with Arjo Klamer (1989, p. 180): “*I do feel that most of this stuff that I pick up and see in the journals seems to have very little relevance to the sort of practical problems that really bother people. I mean...what have these mathematical theories got to say about whether Britain should go into the EMS [European Monetary System, added]? Nothing! That is the sort of question about which economists should have something to say. (...) A lot of these mathematical models, including some of my own, are really terribly much in the air. They lost their feet off the ground.*” One can also find critical comments about the increasing impenetrability of recent theoretical output of mathematical economists in Gerard Debreu’s Presidential address in front of the American Economic Association (Debreu, 1991). It’s quite revealing that even the archpriest of mathematical economics seems to be disturbed by the seeds he sowed with his *Theory of Value* (1959). See also Quddus & Rashid (1994).

cal deduction. In real sciences, however, the criterion of “truth” is not whether the proposition is tautologically deducible from earlier assumptions — i.e. logically true —, but whether or not the proposition corresponds to reality. In both natural and social sciences, the only criterion of truth is experience, i.e. the comparison of theoretic assertions with reality. Consequently, as Kornai (1971, p. 9) points out, the term *theory* thus requires a dual definition:

In the logical-mathematical sciences a theory is a theorem or body of theorems logically deducible from a set of mutually consistent axioms. In the real sciences a theory is a systematic description of the essential interrelations between the variables of reality. That is, only those theorems and propositions (deduced from assumptions not in conflict with reality) which describe the real world more or less accurately may be considered acceptable.

The above definition of real-science theories does not mean that the rank of theory should be reserved exclusively for a completely accurate and perfectly verified system of propositions. A theory may be inaccurate and only approximate in character until a more accurate one can be established. It may also be temporarily unverified, and therefore hypothetical. But only assumptions and hypotheses that have not been shown to contradict reality can be employed (Kornai, 1971, p. 10).

In correspondence with these distinct criteria for establishing the *truth* of a proposition, Kornai recommends two types of scientific conscience for those engaged in scientific inquiry:

“The mathematician may sleep soundly if he believes that there are no inconsistencies among his axioms and that the deductions from the axioms to the theorems are correct; the mathematical-logical verification of his theorems will be complete. Those engaged in the real sciences cannot, however, rest content with that alone. Their consciences can only be clear if their propositions correspond to reality” (1971, p. 9).

Leading mathematical economists have affirmed that their methodological approach to economics has been inspired and encouraged by the spectacular advances of theoretical physics, which have often been obtained by logical reasoning and later beautifully formulated in concise formulas. By deploying logical terminology and applied mathematics in economics, they have merely wanted to emulate and transplant the successful

relationship between physics and mathematics to their field of knowledge.²¹ The brightest minds of physics, however, have not embraced mathematics at the cost of ignoring reality. The theoretical physicists have always relied on experimental results or factual observations in order to prove their theoretical constructions.²²

The root of the cognitive problem in modern economics is thus not to be found in the sphere of formal expression — a more or less deployment of mathematical language and tools — but in the specific way that these mathematical tools have been used in mainstream economic theory. Correspondingly, the current difficulty of extracting clear and consistent trade-policy recommendations from today's mainstream international trade models should not be attributed to mathematics, but rather to the accuracy and internal logic of the specific assumptions, concepts and propositions upon which these models are constructed. Smith, Ricardo and other classical political economists did not face similar difficulties in arriving to economic-policy conclusions, since they made clear recommendations in favor of free trade. It is important to recognize, though, that today's mainstream international trade models are not based on the theoretic framework deployed by these classical political economists, but on the theoretic framework of the neoclassical²³ school of economic thought, which predispose the mindset towards a specific way of thinking about international trade.

The core of the neoclassical framework is the theory of general economic equilibrium, which goes back to French economist Léon Walras (1977). According to this theory, a

²¹ See Debreu (1991, p. 2).

²² Albert Einstein, the highest authority of theoretical physics and creator of one of the most famous equations in the history of science — $E = mc^2$ —, was absolutely clear about the role of experience and reality in proving the truth of logical propositions: *"Physics constitutes a logical system of thought which is in a state of evolution, whose basis cannot be distilled, as it were, from experience by an inductive method, but can only be arrived at by free invention. The justification (truth content) of the system rests in the verification of the derived propositions by sense experiences"* (Einstein, 1954, p. 322). *"The skeptic will say: It may well be true that this system of equations is reasonable from a logical standpoint. But this does not prove that it corresponds to nature. You are right, dear skeptic. Experience alone can decide on truth"* (Einstein, 1954, p. 355).

²³ The term *neoclassical* is used to refer to the school of economic thought which uses the marginal principle in conjunction with a subjective theory of value in analyzing the problem of price and distribution as market processes divorced from the institutional arrangements of the social system. See Young (1978, p. 19).

state of general economic equilibrium is defined as one in which at the ruling system of prices, the supplies and demands of all commodities are equal (no unsatisfied buyers and sellers) and no improvement in anyone's position is possible without a worsening of someone else's position.²⁴ After World War II, neoclassical economists like Kenneth Arrow, Gérard Debreu, Lionel McKenzie and Abraham Wald, have further developed this theory in terms of logical elegance and precision. This postwar development consisted mainly in setting up a logically watertight system that cannot be further improved or perfected. Neo-walrasian general equilibrium theory achieved this state by 1954, with the publication of a famous paper by Nobel Laureates Kenneth Arrow and Gerard Debreu.²⁵

The Arrow-Debreu paper of 1954 provided a rigorous proof of the existence of multi-market equilibrium in a decentralized economy. The proof was rigorous by logical-mathematical standards. In order to obtain the desired result, though, it was necessary to make assumptions that clearly violated reality. Two prominent features of every-day economic activity, imperfect competition and increasing returns to scale, were excluded by assumption, because they could not be accommodated within the Walrasian framework. In general, the assumptions of general equilibrium theory were chosen in order to satisfy the need for logical consistency. In short, the Arrow-Debreu proof had more to do with mathematical logic than with real economics.²⁶

The basic objection to the Neo-walrasian general economic equilibrium theory is not that it is abstract, since no theoretic analysis is possible without abstraction; but that it makes the wrong kind of abstractions. The axioms of the general equilibrium theory contain assertions about the real world that can be refuted and without which the main conclusions of the theory would not hold, as for example, those relating to the laws of

²⁴ The term *equilibrium* is used in economics in different contexts: there is the budgetary equilibrium, the balance-of-payments equilibrium and the general economic equilibrium. To avoid any possible misunderstanding, therefore, it must be noted that in speaking of equilibrium in this thesis, I will always refer — unless further indication — to the general economic equilibrium theory originally formulated by Walras.

²⁵ See Arrow and Debreu (1954).

²⁶ Weintraub (1983, p. 37) affirms: “The “equilibrium” story is one in which empirical work, ideas of facts and falsification, played no role at all.”

production. There are other axioms that are demonstrably untrue; for example, that all prices are given parametrically to all agents and prices constitute the sole kind of information on which decisions are based or that the economy operates without either material or monetary inventories or reserves. And finally there are axioms that, though non-tautological, are incapable, in practice, of being verified or refuted; for example, that the action of all agents is guided solely by the criterion of “optimization” by which is meant that producers maximize their profits or consumers their “utility” (Kaldor, 1985, pp. 11-12).

It is fair to acknowledge that Debreu and his colleagues were generally aware of the empirical shortcomings of modern economic equilibrium theory. They defended themselves by pointing out that they were merely laying the foundations for the explanation of how a decentralized market economy works. The original theoretical framework should be seen as something similar to the scaffolding in the construction of buildings. The scaffolding has to be erected before permanent building can be built, but it will be removed step by step as the permanent building nears completion. However, since Walras first wrote down his system of simultaneous equations over 100 years ago, progress has definitely been backwards not forwards in the sense that the present set of axioms are far more restrictive than those of the original Walrasian model. The process of removing the scaffolding — i.e. relaxing the unreal basic assumptions — has not yet started. Indeed, the scaffolding gets thicker and more impenetrable with every successive reformulation of the theory, with growing uncertainty as to whether there is a solid building underneath (Kaldor, 1985, pp. 12-13).²⁷

Nevertheless, it is still a deep underlying belief common to all neoclassical economists that general equilibrium theory is the one and only starting point for any logically consistent explanation of the behavior of a decentralized economic system. This belief sustained the theory despite the increasing arbitrariness of its basic assumptions. Instead of bringing economic theory closer to reality, as Kaldor rightly observes, the continued fascination exerted by the Neo-walrasian general equilibrium theory on the academic community has created the opposite kind of movement: the economists’ view of reality

²⁷ See also Kaldor (1972, p. 1238-1239).

became increasingly distorted, so as to come closer to the theoretical image rather than the other way around. Thus, neoclassical theorists increasingly claim to believe that competition is virtually perfect; that production functions are linear and that markets are continuously market-clearing (Kaldor, 1985, pp. 60-61).

Given these negative developments, it seems reasonable to affirm that the notion of general equilibrium has been deleterious in economics in general, and international trade theory in particular. The theoretic framework created by the general economic equilibrium paradigm has conducted economic research into a *cul-de-sac*. Far from improving the understanding of how a decentralized market economy may function, it has actually inhibited the progress of knowledge, creating a serious brake on the development of economic thought (Kaldor, 1985, p. 57).²⁸

In order to avoid running into this *cul-de-sac* some economists have proposed a rather radical²⁹ solution: to dismiss the conceptual framework of general equilibrium economics altogether. Without such a major disruption, they argue, it is impossible to make any real progress in modern economic thought.³⁰ The main problem with this radical solution is that it automatically imposes a major task on the shoulders of its advocates: he or she has to offer an alternative theoretical framework to replace the dismissed one. Otherwise, the proposed breach with the general equilibrium paradigm would be regarded as incomplete. Furthermore, a dismissal of the ruling paradigm without offering an alternative would be ineffective. No matter how inconsistent, ivory-towered or empirically rebutted a specific theoretical system may be — the majority of scholars will nevertheless stick to it until a new conceptual framework is available for taking its place.

In the field of international trade theory, though, such an alternative to the neoclassical framework is already available: the classical free-trade case of Smith and Ricardo. But

²⁸ See also Kaldor (1975).

²⁹ I am using here the word “radical” according to its semantic origin, which is “root”, and not in the colloquial sense of “extreme”. It is therefore completely stripped from any negative connotation. A radical solution is one that addresses the root of a problem.

³⁰ See Kaldor, (1972, p. 1240).

some critics of general economic equilibrium have taken a different approach. Disillusioned by the ruling neoclassical paradigm, they have become skeptical towards any attempt to formulate general and systematic theories, arguing against the high-sounding principles and the *pretentious* attitude of the great system-builders. Instead of returning to the theoretic framework of classical political economy, these scholars propose to follow an inductive method of research.³¹

1.5 Deduction vs. Induction

A theory can be proved by experiment but no path leads from experiment to the birth of a theory.

It is the theory that decides what can be observed.

Albert Einstein

Kaldor describes the inductive method of research as the procedure of collecting *stylized facts*³² and then constructing a hypothesis that fits them. In other words, one should subordinate deduction to induction, and discover the empirical regularities first. For discovering these empirical regularities without any theoretical predispositions, Kaldor proposes such *ingenuous* scientific tools as the study of statistics or the realization of special inquiries — including informal conversations with owners or executives of small and big enterprises.³³

Ha-Joon Chang follows a similar methodological approach in his well-known book *Kicking Away The Ladder* (2002), where he analyses the interventionist trade policies followed by Britain and the United States before they reached economic supremacy and converted into the leading free trade advocates of the nineteenth and twentieth century, respectively. Professor Chang is perhaps the most outspoken contemporary advocate of the infant-industry argument, which is usually attributed to Friedrich List. An exhaustive

³¹ See, for example, Kaldor (1985, p. 9).

³² He calls them “stylized facts” because in the social sciences it is impossible to establish facts that are precise and at the same time suggestive and intriguing in their implications, and that admit to no exceptions.

³³ See Kaldor (1985, p. 8).

analysis of this argument will be given in section 4.3 of this doctoral thesis. At this moment, it is only important to point out that the justification for granting protection to infant industries was based on pervasive historical examples rather than on a solid theoretic system. Such a predominantly inductive research method was used and propagated by the German Historical School. Representatives of this school of economic thought branded their methodological approach the *historical method*, which Chang (2002, p. 6) describes as followed:

“This approach, if applied appropriately, does not limit itself to the collection and cataloguing of historical facts in the hope that some pattern will naturally emerge. Rather, it involves searching for persistent historical patterns, constructing theories to explain them, and applying these theories to contemporary problems, while taking into account changes in technological, institutional and political circumstances.”

I initially professed a great deal of sympathy with the down-to-earth approach of the historical method, mainly because of its sharp contrast with the arbitrary assumptions of neoclassical international trade models. The study of historical cases and factual examples seemed to be a necessary counterbalance and possible remedy to the rampant ahistorical character of the current discussions on international trade and economic growth. Furthermore, a combined use of both methods — deduction and induction — seemed to be legitimized by the conclusion of the *New Trade Theory* that history has been a determining factor in the establishment of certain patterns of specialization and trade between countries. Moreover, the historical method appeared to compensate the empirical problems of measuring the exact benefits of two popular arguments in favor of protection: strategic trade policies and external economies. Finally, the study of the factual trade policies implemented by the developed countries in their long march towards wealth and prosperity could bear some valuable lessons for developing countries currently trying to catch up with the developed world.

After becoming more familiar with the free-trade case of the classical political economy, however, I quickly realized that a predominantly inductive method of research without the support of a solid theoretical framework was not suitable for providing a compelling answer for the main research question of this doctoral thesis. That is to say because classical political economists argue that protectionism would certainly retard a nation's journey towards wealth and economic prosperity, but it would not always be capable of preventing that nation from becoming wealthy altogether, and still less of

making it go backwards. If a nation could not prosper without implementing free trade, there is not a single country in the world that could ever have prospered.³⁴ Therefore, Smith and Ricardo would not question the accuracy of Chang's overwhelming historical account regarding the protectionist trade policies of Britain, the US and other developed countries, but certainly his conclusion about the proper trade policy to boost economic development. They would argue that Britain and the United States, as every other wealthy nation in the history of humankind, have become wealthy not *because* but *despite* the use of a profuse and ingenious arsenal of protectionist policies.

An effective refutation of the classical case for free trade cannot be obtained by empirical testing or pervasive historical research. It is simply impossible to find a historical example where two identical countries facing identical historical circumstances have implemented opposing trade policies — the first country a free trade policy and the other a protectionist trade policy — in order to find out which economy has grown faster. It is equally not suitable to compare the growth statistic of the same country in different historical circumstances to prove whether or not it has developed faster when implementing a protectionist trade policy instead of free trade. One of the main lessons of the classical theory of international trade is that the trade policies of the rest of the world have a decisive influence on the economic results of a single country. The international division of labor cannot flourish if one country is willing to trade but the others not.

The decision to rely predominantly on a solid theoretical framework for analyzing historical processes should not be misinterpreted as an argument against the study of concrete historical data or case studies. Any theoretical system created mainly by deductive logic should always be complemented with the systematic empirical testing of its main propositions. The respective magnum opus of the three great classical political economists — i.e., Adam Smith's *Wealth of Nations*, David Ricardo's *Principles* and Karl Marx's *Das Kapital* — are excellent examples of how a theoretical system can serve as a valuable guide for better understanding the economic development of specific economies. One of them, namely Karl Marx, even dedicated his main research effort to

³⁴ One can draw such a conclusion when reading, for example, Smith (WN, IV.ix.28, p. 674).

discover and investigate the laws that governed the historical process. These three great economists used the same theoretical framework: that of the classical political economy.

Thus, the single most important methodological guideline of this doctoral thesis is not the contraposition of positive and normative economics, mathematical and literary economics, or deduction and induction; all these contrapositions are essentially fictitious and a futile distraction from the single methodological contraposition that truly matters when making a reasoned judgment on the virtues and inconveniences of recommending a free-trade policy for developing countries: the contraposition between the classical and the neoclassical international trade theories.

1.6 Classical vs. Neoclassical Economics

Making a contraposition of the classical and the neoclassical international trade theories is a contested subject in academic circles, since it touches a broader debate about the relationship between these two major schools of economic thought. The issue of dispute in this century-old debate is not whether they are indeed two distinctive schools of economic thought — a view on which the vast majority of scholars in economics would agree; the issue at stake is whether classical economics should be seen as a mere forerunner of modern neoclassical economics — the predominant interpretation nowadays — or as a school of thought that has a distinct and eventually superior theory of value and distribution, international trade and economic growth.

Most neoclassical economists consider their economic theory as essentially continuous with classical economics.³⁵ According to them, there is no hard and fast line between classical and neoclassical economics, since the majority of the neoclassical concepts and propositions are also supposed to be found in classical political economy, although in a confused or embryonic state. Therefore, neoclassical scholars often consider that the contemporary study of classical political economy has merely an antiquarian value, which should be relegated to courses of history of economic thought (Peach, 1993). In their view, the classical concepts and insights are not suitable for accu-

³⁵ This interpretation goes back to Marshall (1920, p. 814).

rately understanding and unfolding the real functioning of a modern capitalistic economy.

Despite these attempts to discredit and hold down the study of classical political economy, a process of academic revival of this school of economic thought has taken place during the second half of the twentieth century. Walsh (2000) distinguishes two separate stages of this revival process: The first stage was mainly centered around the works of David Ricardo, with Piero Sraffa as the leading theorist; the second stage of this academic revival process has been led by Nobel laureate economist Amartya Sen, who has worked on the ideas of Adam Smith.

This doctoral thesis is intended to make a modest contribution to the ongoing revival process of classical political economy, at least in the field of international trade theory. Any analysis of the classical theory of international trade has to pay equal attention to the theoretical insights of Smith and Ricardo, since both made crucial contributions to it. As will be demonstrated later on, their contributions to international trade theory are essentially complementary and still very relevant. Such an integrative view of the principal classical economists could be proven crucial for advancing to a new stage in the revival process of classical political economy.

The reemergence of classical political economy in modern economic thought has led to three important conclusions: First, the conventional interpretation of the relation between the classical and the neoclassical theory, which focuses on the continuity between the two, is wrong. The new interpretation highlights the substantially different approaches of these two schools of economy thought, arguing that the emergence of the neoclassical approach should be seen as a discontinuity in the history of economics. Second, the classical school did not disappear around 1870 as is commonly supposed, but have contested with its neoclassical rival for primacy in the field of economic thought until the present. Third, studying the classical approach to economics remains relevant, because of its potential for dealing with long-term economic growth and its consequences for the social relations of production (Young J. T., 1978).

For the present doctoral thesis, the important methodological implication of the above conclusions is that there is not a single case for free trade, but two very distinct cases. In order to work out the main differences between the classical and the neoclassical cases for free trade, however, several theoretical obstacles have to be removed. The

most important one has to deal with the current interpretation of Ricardo's so-called *comparative advantage theory*.

Comparative advantage has had a prominent place within the neoclassical case for free trade. The integration of this classical insight into the neoclassical international trade theory has been presented as an example of continuity between the two schools of economic thought. At the same time, the current interpretation of comparative advantage is responsible for the perceived rift within the classical theory of international trade.³⁶ This rift is supposed to be between the Smithean logic of trade and his dynamic analyses oriented towards of long-run economic growth, on the one hand, and the Ricardian logic of trade, which has been formalized in terms of the static theory of efficient allocation of the given resources, on the other. These two logics of trade are seen as radically different and incompatible.³⁷ Moreover, because foreign trade analysis in modern economics has been dominated by the Ricardian logic of trade, whereas the analysis of the domestic economy has proceeded along Smith's insights, there has also been a perceived rift between the international trade theory and the theory of domestic economic development.

The accurate interpretation of the famous numerical example of chapter 7 of Ricardo's *Principles* containing the comparative-cost insight, which I obviously cannot anticipate here, suggests a completely different perception of the perceived rift in international trade theory. According to the new interpretation, the rift is not between the international trade theories of Smith and Ricardo, but between the classical and the neoclassical cases for free international trade. Ricardo's comparative-cost insight should now be considered as essentially compatible and complementary to Smith's theory of international trade, but incompatible with neoclassical international trade theory.

Given the crucial role that comparative advantage has played in international trade theory for the past two centuries, it seems to be evident that the implications of any significant reinterpretation of this concept have to be necessarily far-reaching. The reinterpretation of Ricardo's numerical example leads to a complete restatement of the

³⁶ See Myint (1977).

³⁷ See Buchanan & Yoon (2002).

classical international trade theory. The logical starting point for this restatement of the classical case for free trade, though, has to be the *Wealth of Nations*, as will be explained in the next section.

1.7 The Primary Sources of the Classical Case for Free Trade

‘Classic.’ A book which people praise and don’t read.

Mark Twain

At the first look, the methodological approach to take the *Wealth of Nations* as the starting point and main primary source for the restatement of the classical case for free trade seems uncontroversial. After all, the majority of economists consider the publication of this book in 1776 as the birth date of economics as an independent academic discipline, as well as a milestone in the formulation of the classical case for free trade. Indeed, the international trade theory has been very much influenced by this Smith’s book, as any comparison of the economic literature in the decades before and after its publication would reveal. Before the *Wealth of Nations*, there was a widespread presumption in economic thought that an appropriate use of import tariffs and other restrictions with regard to international trade was likely to constitute a better economic policy than free trade. This general presumption in favor of government intervention in international trade was undermined by Smith’s economic analysis, which established the proposition among economic thinkers that free trade was superior to import protection in producing a greater amount of wealth. “*From this point on*”, as Irwin (1998, p. 3) states, “*the burden of proof in economic debates has been with those advocating restrictions on trade to demonstrate how such policies would contribute to a country’s economic wealth.*”

The problem with taking the *Wealth of Nations* as the primary source, though, lies in the current negative reception of Smith as an international trade theorist in modern economic literature. It seems paradoxical to me that mainstream neoclassical economists generally give Smith little credit as an international trade theorist — or ignore him almost completely —, while they continue to praise him as the pioneering advocate of

free trade.³⁸ Even the scholars who appreciate the importance of Smith's analysis regarding the growth-stimulating effects of foreign trade endorse the predominant view that Smith was not a great trade theorist, because he did not come up with comparative costs or reciprocal demand.³⁹ This failure allegedly deprives Smith's international trade theory of its cutting edge. The widespread popularity of Ricardo's comparative-advantage insight has condemned Smith to a second-class theorist in the field of international trade.

In addition to this failure to discover comparative advantage, which will be analyzed later on⁴⁰, some well-known scholars have criticized Smith for his alleged lack of creativity.⁴¹ They have expressed bewilderment about the fact that Smith was able to accomplish the switch of the *burden of proof* from free traders to trade interventionists without introducing a single truly original concept or insight regarding international trade in the *Wealth of Nations*. According to them, all the important concepts and insights in Smith's free-trade case had already been stated by other authors — and allegedly much clearer and more precise than Smith — well before the publication of this book. The charge regarding Smith's lack of originality — if proven right —, would have direct consequences on the methodological decision to take the *Wealth of Nations* as the primary source for the classical case for free trade. It seems therefore appropriate to analyze it here at some length.

To begin with, it is important to realize that the task of accurately identifying the original author of a specific concept or proposition is difficult to accomplish, since it requires a truly encyclopedic knowledge of the prolific literature about the subject. Even then, it is quite possible that some day another dedicated researcher will come up with

³⁸ Viner (1937, pp. 108-109), for example, affirms that “*all the important elements in Smith's free-trade doctrine had been presented prior to the Wealth of Nations.*” Robbins (1971, p. 191) argues that Smith's contribution lacks analytical rigor, and Hollander (1973, Ch. 9) views Smith's treatment of the issue as unclear, contradictory and in parts incompatible with the rest of his analysis. For a vindication of Smith by a mainstream economist, see Samuelson (1977).

³⁹ See, for example, Bloomfield (1975, pp. 456 and 480-481).

⁴⁰ The reader will find a reply of this critique towards Smith in section 2.4 of this thesis.

⁴¹ Schumpeter (1954, p. 184) asserts that the *Wealth of Nations* “*(...) does not contain a single analytic idea, principle, or method that was entirely new in 1776.*” Moreover, Viner (1927, p. 200) affirms: “*On every detail, taken by itself, Smith appears to have had predecessors in plenty. On few details was Smith as penetrating as the best of his predecessors.*”

the discovery of a forgotten pamphlet where a hitherto little-known author had already described in an obscure language the essence of the concept or proposition. In that case, the credit given hitherto to the later author for his/her alleged originality and innovative thinking may appear unfounded. In order to prove his lack of originality, though, it is not enough to find another thinker who had written something similar before him/her; it is also mandatory to prove that he/she was aware of the existence of this newly discovered pamphlet when writing about the subject.

Notwithstanding the factual correctness of the critique regarding Smith's lack of originality, it would be erroneous to judge his merits — or the merits of any other great thinker — merely by the novelty of his main concepts and propositions. Such an excessive and/or exclusive emphasis on originality neglects the essentially collaborative nature of all scientific inquiry. The history of science may be seen as a spectacular succession of revolutionary discoveries and innovations, but if one pick up a single scientist from this splendid and incessant stream of human creativity in order to highlight his or her genuine individual contribution, one may find out that he or she is — generally speaking — much less innovative and revolutionary than originally thought. That is because the innovations of this individual scientist are often preconditioned by the precedent research efforts of others. Even his/her well-deserved credit is often the result of the work done by his/her colleagues, who have empirically confirmed or further developed the original ideas or theories of this scientist.

Isaac Newton, undoubtedly one of the greatest and most innovative minds in the history of science, once wrote the famous and often quoted sentence regarding his personal scientific contributions: *"If I have seen further it is by standing on the shoulders of giants."*⁴² The same could be said about the contributions made by Adam Smith, David Ricardo or Karl Marx to classical political economy. They are regarded as masterminds of the economic science not because they were able to gain their concepts and propositions from nowhere, but because they were able to draw a new picture out of already

⁴² Ironically, even Newton's famous denial of originality is not particularly original. Merton (1985) proves that other authors had used this aphorism at least 27 times before Newton wrote it in his famous letter to Hooke in 1676.

known pieces of insights, and this new picture revolutionized the way we look and analyze the economic reality from that moment on until now.

The *Wealth of Nations* is a paradigmatic example for this kind of innovation. In this book Smith succeeds in bringing together formerly disparate and disperse economic concepts and propositions into a unified and coherent economic theory, now called classical political economy, which has proven to be a powerful and useful theoretic framework to analyze the functioning of the economy. Therefore, it might be true that Smith had numerous predecessors, and that some of them were even able to find a superior way to express specific ideas; more importantly, however, is the fact that these ideas are often to be found in isolated passages not wholly consistent with the views expounded in the surrounding text.⁴³ Consequently, none of Smith's predecessors were able to overthrow established notions of international trade policy, and to create a new presumption that free trade was the best policy to be pursued. Thus, Smith's foremost contribution is that, while drawing upon the works of others, he orders these former isolated elements in a systematic way, improving the quality of economic analysis in support of free trade.⁴⁴ The importance and continued relevancy of Smith's systematic analysis on international trade is the main reason for making the *Wealth of Nations* the primary source of the classical case for free trade.

Besides Smith, the most important contributor to classical international trade theory is David Ricardo. His magnum opus, *Principles of Political Economy and Taxation*, is the other main primary source for the restatement of the classical case for free trade. As already been said, the misinterpretation of his numerical example in the famous chapter 7 of the *Principles* is responsible for the perceived rift within the classical theory of international trade. Consequently, Ricardo's main insights on international trade theory have often been presented as incompatible and directly opposed to Smith's theory.

The failure to understand the essentially complementary nature of Ricardo's insights may have been also favored by the general plan chosen by him when writing the *Principles*. Constantly troubled by self-doubts with respect to his writing skills, he decided to

⁴³ This fact is even recognized by Viner (1937, p. 108).

⁴⁴ For the presence of system in Smith's thinking, see also Skinner (1990, p. 157).

dedicate the *Principles* only to those aspects that he considered to be new and/or in disagreement with already established propositions of political economy, leaving the task of presenting a complete view of the science for a future book.⁴⁵ Such a *modus operandi* tends to artificially emphasize the differences and minimize the level of agreement with respect to Adam Smith. Ricardo is well aware of this danger, as the following paragraph from the preface of the *Principles* proves:

“The writer, in combating received opinions, has found it necessary to advert more particularly to those passages in the writings of Adam Smith from which he sees reason to differ; but he hopes it will not, on that account, be suspected that he does not, in common with all those who acknowledge the importance of the science of Political Economy, participate in the admiration which the profound work of this celebrated author so justly excites” (Vol. I, p. 6).⁴⁶

Unfortunately, Ricardo died six years after the publication of the *Principles*, at the early age of fifty-one, without accomplishing the task of offering his complete view on political economy. The *Principles* remain the main source of his thoughts on political economy and international trade. Therefore, it is important to read this book always in close association with the relevant passages of the *Wealth of Nations* in order to interpret Ricardo’s contributions as accurately as possible.

For accomplishing the difficult task of restating the classical case for free trade, it is necessary to strip it from the theoretical ramblings that have been attached to it over the years. Therefore, I have followed the principle of consulting first and foremost these two sources. To consult the primary source for the understanding of a complex concept or theory is a widely recommended and regrettably not always followed practice in scientific research. The reliance on secondary sources, whatever valuable and prestigious they might be, always bears the danger of misinterpreting the original thinker. This potential danger is widely increased when the researcher decides to rely exclusively on secondary sources. By following this approach — which cannot be considered a truly scientific

⁴⁵ See Ricardo’s letter to James Mill (VII, p. 112) on December 20th, 1816, responding to Mill’s letter of December 16th (VII, p. 106), which is equally worth reading.

⁴⁶ Throughout this dissertation, all direct quotations of Ricardo are extracted from *The Works and Correspondence of David Ricardo*, Volume I to XI, 2004, edited by Piero Sraffa. I will refer to them usually by indicating the volume and page numbers only.

practice —, generations of scholars may unconsciously reproduce and perpetuate the possible distortions and errors made by earlier interpreters of the original author.

The meticulous application of this research principle has resulted in the abundant use of direct quotes from the *Wealth of Nations* and the *Principles*, particularly in the following chapter dedicated to the classical free-trade case. I obviously regard these quotes as necessary, and hope that they do not compromise the fluidity and general understanding of the reading.

Finally, I do not pretend to claim that this doctoral thesis offers *the* accurate restatement of the classical case for free trade. It merely contains my personal interpretation of the classical theory of international trade. It is up to the academic colleagues to judge the accuracy of this interpretation.

2 The Classical Free Trade Theory

2.1 Wealth and Real National Income

The wealth of those societies in which the capitalist mode of production prevails, presents itself as an immense accumulation of commodities.

Karl Marx (Das Kapital)

Adam Smith, as already pointed out, formulates in the *Wealth of Nations* the most systematic and compelling case in favor of free trade until then. His analysis on foreign trade, though, is part of a broader investigation concerning the proper means for increasing the wealth of a country to the utmost.⁴⁷ Consequently, he considers the expected effect on the amount of wealth available in a country as the main benchmark for judging the merits of particular economic policies, including those directly related to international trade.

Given its role as the main benchmark for evaluating international trade policies, it seems clear that the concept of wealth is both central and critical for an accurate understanding of Smith's systematic analysis of foreign trade. As he rightly states, the wealth of a country always consists in the "(...) consumable goods annually reproduced by the labor of the society" (WN, IV.ix.38, p. 678).⁴⁸ This notion of wealth seems rather self-evident nowadays, but it was certainly not obvious back in 1776, as a brief comparison with the wealth-notion of many supporters of mercantilism shows.

⁴⁷ To increase the wealth of the country is, according to Smith, the principal aim of the science called political economy. He states: "*Political economy, considered as a branch of the science of a statesman or legislator, proposes two distinct objects; first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the publick services. It proposes to enrich both the people and the sovereign*" (WN, IV.intro.1).

⁴⁸ All references to the *Wealth of Nations* will be to the Glasgow Edition of the Works and Correspondence of Adam Smith, edited by R. H. Campbell and A. S. Skinner. Quotations will be referenced using the Glasgow convention of citing the book, chapter and paragraph, but will also include the page number.

Mercantilism was the predominant school of economic thought before the arrival of classical political economy. For many mercantilist writers, wealth consisted in the inconsumable riches of money, mainly gold and silver, which were the principal currencies during the 17th and 18th centuries. Smith explicitly refers to the consequences of such a wrong notion of wealth for the subsequent analysis of foreign trade:

“The two principles being established, however, that wealth consisted in gold and silver, and that those metals could be brought into a country which had no mines only by the balance of trade, or by exporting to a greater value than it imported; it necessarily became the great object of political economy to diminish as much as possible the importation of foreign goods for home-consumption, and to increase as much as possible the exportation of the produce of domestick industry. Its two great engines for enriching the country, therefore, were restraints upon importation, and encouragements to exportation” (*WN*, IV.i.35, p. 450).

Smith’s notion of wealth is clearly superior compared to the bulk of mercantilist writers. It is important to acknowledge, though, that it cannot be seen as an innovation to economic thought, because the most advanced representatives of mercantilism had already arrived to the same notion of wealth as Smith. Despite having an accurate concept of wealth, though, these advanced mercantilists failed to apply it consistently to their foreign trade analysis.⁴⁹ Instead, they continue to use the money notion of wealth for their international trade theory, which necessarily lead them to consider a positive balance of trade as the foremost objective of international trade.

Before the advent of classical political economy, another school of economic thought, *physiocracy*, had already argued forcefully against the mercantilists’ theories regarding foreign trade, particularly against the fallacies of the balance-of-trade doctrine (Bloomfield, 1938, p. 718ff.). The Physiocrats propagated the correct notion of wealth, but they made a decisive error with regard to the source of that wealth; they considered only the labor that is directly employed to land as productive. According to them, only

⁴⁹ Smith himself recognizes this when he states: “*Some of the best English writers upon commerce set out with observing, that the wealth of a country consists, not in its gold and silver only, but in its lands, houses, and consumable goods of all different kinds. In the course of their reasonings, however, the lands, houses, and consumable goods seem to slip out of their memory, and the strain of their argument frequently supposes that all wealth consists in gold and silver, and that to multiply those metals is the great object of national industry and commerce*” (*WN*, IV.i.34, p. 450).

the natural produce of the earth — first and foremost agricultural products but also raw materials — should be considered the real source of all wealth in society.

This limited concept about the source of wealth dominates the policy recommendations of the Physiocrats with respect to foreign trade. In asserting the economic primacy of raw materials and agricultural products, they generally judge the exportation of these items and the importation of manufactured goods more desirable than the reverse, turning the ideal commodity composition of trade proposed by the mercantilists on its head. In fact, it is safe to affirm that the Physiocrats advocated free trade more as a matter of convenience than conviction: only because a free trade policy would benefit agriculture in their home country — France — in that particular historical moment, they supported it. It is easy to imagine them having a protectionist bias in other geographical latitudes or historical circumstances (Irwin, 1998, p. 65ff).⁵⁰

Besides the calls for removing the impediments on grain exports, the Physiocrats actually did not devote much attention to international trade at all. On the contrary, they often tried to minimize the role of international trade in the economy, asserting that internal trade is of greater importance and, therefore, that a large foreign trade was neither essential nor desirable.⁵¹ Some Physiocrats even considered a large volume of trade to be an indication, not of prosperity, but of impoverishment. It might either represent a narrow domestic market, resulting in large exports, a scarcity of domestic wealth necessitating large imports, or regional shortages due, for example, to crop failures (Bloomfield, 1938, p. 731). Such a negative attitude toward foreign trade would necessarily bring the Physiocrats in direct confrontation with classical political economists in some later point of history.

⁵⁰ A modern Physiocrat would most probably defend the contemporary trade policies of France, which is a particularly strong supporter — and beneficiary — of the Common Agricultural Policy of the EU. This proves that it is important to go beyond the policy recommendations, which can be influenced by changing circumstances, and analyze the economic theory of a particular school of economic thought, because the theory is the permanent fundament of its policy recommendations. Different circumstances might lead to completely opposed policy recommendations, although the theoretic body remains unchanged.

⁵¹ As Bloomfield (1938, p. 731) affirms: *“In reaction to the mercantilist stress on foreign trade, the Physiocrats were led to belittle its importance and to view it with disdain.”*

Smith rejects this narrow concept about the source of wealth proposed by the Physiocrats. Instead, he formulates the well-known distinction between productive and unproductive labor⁵², where the former is involved in the creation of commodities, while the latter is involved in the provision of services. By labeling the labor employed in the provision of services as *unproductive*, Smith does not deny the fact that services like education, health care, defense, justice or transportation are quite useful and paramount for the economic progress of any nation. He merely wants to point out with this distinction that the labor of the workforce employed in providing these services does not directly contribute to aggregate material output, and that the material needs of this people — i.e. food, clothing and housing, to only mentioning the fundamental needs — have to be provided by the labor of others.

In summary, it seems save to affirm that Smith's foremost merit with respect to the precedent schools of economic thought is not originality but consistency when applying the concept of wealth to foreign trade analysis. This consistency is due greatly to the fact that he uses a single main criterion for evaluating the various effects of different commercial policies, namely, if these trade policies tend to increase or decrease the *real annual revenue* of society.

The term *real annual revenue* proposed by Smith is the equivalent of the modern denomination *real national income* (Irwin, 1998, p. 76). Thus, the expected effects on real national income should be the main benchmark for judging the economic merits of a particular foreign trade policy for any modern follower of classical political economy. Nowadays, mainstream economists generally judge the merits of international trade policies in terms of their impact on the economic growth of a country, using in most cases the *gross domestic product* (GDP) as the main indicator. There is, however, a subtle but important difference when using GDP instead of real national income as the main benchmark for assessing the merits of foreign trade policies.

According to basic national income accounting, GDP is defined as the market value of all final goods and services produced in a country in one year. Following the most popular national output accounting method, the expenditure *approach*, GDP is obtained

⁵² See Smith (*WN*, II.iii, pp. 330ff.).

by the sum of consumption (C) plus investment (I) plus government spending (G) plus exports (X) minus imports (M) — that is:

$$GDP = C + I + G + X - M$$

On the other hand, *real national income* is the total amount of goods and services available in an economy ($C + I + G$), which is gross domestic output (GDP) plus imports minus exports or:

$$C + I + G = GDP + M - X$$

When taking GDP as the main benchmark, it appears that exports are more beneficial than imports because the former contributes to an increase of the GDP, while the latter decreases GDP. When taking real national income as benchmark, it is exactly the other way around: imports are seen as more beneficial than exports, because imports increase and exports decrease real national income.

The GDP-benchmark often leads to associate a high level of imports and trade deficits with a decline of domestic production and a high unemployment rate. After all, if the national government would not let the foreign commodities in, they would have to be produced at home. This fallacious conclusion ignores the fact that imports have to be paid ultimately with exports. As Ricardo correctly states: “*No country can long import, unless it also exports, or can long export unless it also imports*” (Vol. I, p. 263).

The fact that national economies can run significant trade deficits during a prolonged period of time is not a suitable objection. Looking merely at a negative trade balance often omits the exportation of services, for example tourism. It is therefore more appropriate to analyze the balance of the current account, which includes commodities and services. Current account deficits have to be compensated by a surplus in the capital account. Such an inflow of foreign money, either by lending or investment, finds its way into national productive activity.

Smith has a preference for the indicator that highlights the beneficial effects of imports because “*(...) consumption is the sole end and purpose of all production*” (WTN, IV.viii.49-50, p. 660). A country is ultimately interested in consumable imports, whereas exports are what it has to give in exchange. Not only that, in the long-run, a high level of imports must go along with a high level of exports — from an economic point of view, it

does not make any sense to export without importing, or to export more than to import over a long period of time.

That being said, it is important to point out that the question of whether foreign trade benefits or hurts the domestic economy cannot be resolved by comparing the different indicators of national income accounting. A deeper understanding of economic theory is required to appreciate the nature of the benefits of international trade for the national economy.

2.2 The Mutual Gains from International Trade

All these national jealousy which prompt them to spite and ill-will each other, and refuse to be supplied by them in any convenience of life, must lessen the exchange of commodities, hurt the division of labor, and diminish the opulence of both.

Adam Smith

Smith and Ricardo firmly believed in the proposition that free international trade would *very powerfully contribute to increase the mass of commodities, and therefore the sum of enjoyments* of every nation.⁵³ Their strongly conviction regarding the mutual benefits of free trade is not based on wishful thinking, the adherence to a cosmopolitan ideal, or the furtive pursued of British national interests — as Friedrich List and many others have later suggested. It is rather based on the insightful analysis of the economic gains that accrue to every nation engaging in international trade without artificial restraints.

Smith refers to the gains from international trade in the following well-known passage of the *Wealth of Nations*:

“Between whatever places foreign trade is carried on, they all of them derive two distinct benefits from it. It carries out that surplus part of the produce of their land and labor for which there is no demand among them, and brings back in return for it something else for which there is a demand. It gives a value to their superfluities, by exchanging them for something else, which may satisfy a part of their wants, and increase their enjoyments. By means of it the narrowness of the home market does not hinder the division of labor in any particular branch of art or manufacture from being carried to the highest perfection. By opening a more extensive market

⁵³ The words in cursive are from Ricardo (Vol. I, p. 128).

for whatever part of the produce of their labor may exceed the home consumption, it encourages them to improve its productive powers, and to augment its annual produce to the utmost, and thereby to increase the real revenue and wealth of the society” (*WN*, IV.i.31, pp. 446-447).

According to the above quote, there are two main benefits from foreign trade: first, it provides an outlet for the surplus-production of particular commodities, meaning by *surplus* a level of production above domestic requirements, also known as the *vent-for-surplus theory*; and second, foreign trade extends the market and thus encourages the division of labor and the *improvement of the productive powers* of the country.⁵⁴

Unfortunately, Smith’s well-known reference to the gains from international trade has spurred a great deal of controversy, because most scholars consider the first benefit mentioned, the vent-for-surplus theory, as a theoretical flaw. Smith’s error cannot be excused by pointing out that it is, perhaps, merely a careless formulation, since he repeatedly refers to this alleged benefit of international trade in other passages of the *Wealth of Nations*.⁵⁵ A particularly eloquent exposition of the vent-for-surplus theory can be found in the following paragraph:

“When the produce of any particular branch of industry exceeds what the demand of the country requires, the surplus must be sent abroad, and exchanged for something for which there is a demand at home. Without such exportation, a part of the productive labour of the country must cease, and the value of its annual produce diminish. The land and labour of Great Britain produce generally more corn, woollens, and hard ware, than the demand of the home-market requires. The surplus part of them, therefore, must be sent abroad, and exchanged for something for which there is a demand at home. It is only by means of such exportation, that this surplus can acquire a value sufficient to compensate the labour and expence of producing it” (*WN*, II.v.33, p. 372).

⁵⁴ *Productive forces, productive powers* or *forces of production* (in German, *Produktivkräfte*) refers to the combination of the human physical and intellectual labor power with the means of production (tools, machinery, infrastructure). This concept is normally associated with Marx’s *Critique of Political Economy*, although it already figures prominently in Smith’s reference to the *productive powers of labor* in Book I of the *Wealth of Nations*.

⁵⁵ See, for example, Smith (*WN*, III.i.1, p. 376) and (*WN*, IV.iii.c.4, p. 489).

Ricardo, who is well-known for his rigorous deductive reasoning⁵⁶, rejected Smith's vent-for-surplus theory on logical grounds. Referring exactly to the above passage of the *Wealth of Nations*, he writes in a footnote of the *Principles*:

“One would be led to think by the above passage, that Adam Smith concluded we were under some necessity of producing a surplus of corn, woollen goods, and hardware, and that the capital which produced them could not be otherwise employed. It is, however, always a matter of choice in what way a capital shall be employed, and therefore there can never, for any length of time, be a surplus of any commodity; for if there were, it would fall below its natural price, and capital would be removed to some more profitable employment. No writer has more satisfactorily and ably shewn (sic!) than Dr. Smith, the tendency of capital to move from employments in which the goods produced do not repay by their price the whole expenses, including the ordinary profits, of producing and bringing them to market” (Vol. I, p. 291).

Ricardo rejects the vent-for-surplus theory because it is in contradiction with the insight that it is always a matter of choice — not necessity — in what concrete manner a capital shall be employed. In the above footnote he acknowledges that he learned this valuable proposition precisely in the *Wealth of Nations*, tempering the necessary critique of Smith's erroneous vent-for-surplus theory with a fair tribute to the founder of classical political economy.

Ricardo's refutation of the vent-for-surplus theory is not limited to a mere footnote.⁵⁷ His celebrated chapter *On Foreign Trade* in the *Principles* starts with the proposition that no extension of international trade can immediately increase the amount of value in a country, since the value of all foreign goods is measured by the amount of value embodied in the commodities that are given in exchange for them. International trade, though, will certainly contribute to an increase of the mass of commodities available in the national economy.⁵⁸

⁵⁶ Maneschi (2004, p. 435) calls Ricardo the *master logician of political economy*.

⁵⁷ See also Ricardo (Vol. I, pp. 294-296).

⁵⁸ Ricardo states: “No extension of foreign trade will immediately increase the amount of value in a country, although it will very powerfully contribute to increase the amounts of commodities, and therefore the sum of enjoyments. As the value of all foreign goods is measured by the quantity of the produce of our land and labour, which is given in exchange for them, we should have no greater value, if by the discovery of new markets, we obtained double the quantity of foreign goods in exchange for a given quantity of our's” (Vol. I, p. 128).

John Stuart Mill is often credited in the economic literature for the refutation of the vent-for-surplus theory⁵⁹, based on a paragraph he wrote thirty years after the publication of the *Principles*. J. S. Mill states:

“The expression, surplus produce, seems to imply that a country is under some kind of necessity of producing the corn or cloth which it exports; so that the portion which it does not itself consume, if not wanted and consumed elsewhere, would either be produced in sheer waste, or, if it were not produced, the corresponding portion of capital would remain idle, and the mass of productions in the country would be diminished by so much. Either of these suppositions would be entirely erroneous. The country produces an exportable article in excess of its own wants from no inherent necessity, but as the cheapest mode of supplying itself with other things. If prevented from exporting this surplus, it would cease to produce it, and would no longer import anything, being unable to give an equivalent; but the labour and capital which had been employed in producing with a view to exportation, would find employment in producing those desirable objects which were previously brought from abroad: or, if some of them could not be produced, in producing substitutes for them. These articles would of course be produced at a greater cost than that of the things with which they had previously been purchased from foreign countries. But the value and price of the articles would rise in proportion; and the capital would just as much be replaced, with the ordinary profit from the returns, as it was when employed in producing for the foreign market. The only losers (after the temporary inconvenience of the change) would be the consumers of the heretofore imported articles; who would be obliged either to do without them, consuming in lieu of them something which they did not like as well, or to pay a higher price for them than before” (JSM, 1909, III.xvii.11).

In the above paragraph, though, J. S. Mill merely restates Ricardo’s critique of the vent-for-surplus theory without mentioning him. He also misses to give credit to Smith for the counterargument presented regarding the tendency of the stockowners to seek alternative employment for their capital. Instead, he calls the vent-for-surplus theory a “*surviving relict of the Mercantile System*”, which is particular offensive, given the fact that Smith was the most eloquent and relentless detractor of mercantilism. Mill’s accurate remarks about the consequences of a cease in export production — the country’s inability to pay for its imports and the resulting capital redeployment to produce the formerly imported commodities or their substitutes at home — can also be traced back to Ricardo.

⁵⁹ See, for example, Williams (1929) and Myint (1958).

In the past decades, some scholars have tried to partially revive the vent-for-surplus theory, arguing that it may be valid for the limited case of joint production, i.e. when more than one product category is obtained in the production process.⁶⁰ In the case of multiple-product-processes of production, the surplus- or overproduction of certain commodities cannot be avoided, since they constitute a by-product in the production of other commodities. In the absence of foreign trade, some part of these by-products would be thrown away as things of no value.⁶¹ If these superfluous products could be sent abroad and exchanged with other commodities, though, they would regain some value.

The problem with this sort of rescue-attempt of the vent-for-surplus theory is that it does not take into account that the total amount of value has not been increased by exporting the superfluous products, since the value given to these superfluities or by-products has to be subtracted from the amount of value contained in the main product of the joint production. It may be a matter of deliberation how the total amount of value is distributed between main and by-product(s), but there should be consensus regarding the proposition that a certain amount of labor always gives the same amount of value to an aggregated production.

Perhaps the most significant consequence of the *vent-for-surplus* fallacy is that it diverts — at least partially — the attention from the second benefit mentioned by Smith in his famous paragraph about the gains from trade, namely, that foreign trade further encourages the division of labor and *the improvement of the productive powers of labor* by providing a more extended market. This positive effect of international trade on labor productivity, which Myint labels as Smith's *productivity theory*⁶², is indeed a remarkable insight, which more than compensate for the previous flaw.

The logical rationale behind the *productivity theory* of international trade might be reconstructed succinctly as followed: improvements in the productive powers of labor

⁶⁰ See Myint (1977) and Kurz (1992).

⁶¹ According to the rule of “free” goods, a commodity that is in excess supply obtains a zero price.

⁶² See Myint (1958, p. 318; 1977, p. 242).

depend greatly on the level achieved by the division of labor, which in turn is limited by the extent of the market. An increase in the size of the market via foreign trade allows national producers to fabricate commodities at higher scales, in order to sell them not only to their fellow citizens but also to foreigners, and often predominantly to the latter. The real or potential threat of foreign producers eager to sell their own commodities in the home market often turns this possibility into a competitive necessity for the national producers. The resulting scales of production above domestic requirements encourage technical innovations in production techniques and machinery. They also induce the deployment of more efficient methods of economic organization. Therefore, international trade promotes industrial production techniques for the fabrication of all different sorts of tradable commodities.

The main economic benefit and principal effect of any kind of trade — whether it is within or between national borders — is that it boosts labor productivity at home. This increase in labor-productivity is the wellspring of wealth and raising living standards of any economy. The total amount of commodities available in an economy is the sum of the home-production — also known as the *direct method of production* — and imports — the *indirect method of production*. Since imports have to be paid ultimately with the export of home-made commodities or services, the total amount of wealth available for consumption always depends on the productivity of the national labor force, irrespective of the fact that an important part of the commodities consumed might be actually produced outside the national borders.

By explicitly referring to the beneficial effects of foreign trade on the division of labor and the productive forces of labor, Smith connects his international trade theory to the dynamic analysis of the domestic economy in Book I of the *Wealth of Nations*. Foreign trade is not essentially different from domestic trade. As a result, his international trade theory is directly related and closely interwoven with the goal of long-run economic development of the national economy. It is thus Smith's productivity theory, and not his

flawed vent-for-surplus theory, which should be regarded as highly relevant for appreciating the beneficial effects of free trade for developing countries.⁶³

The division of labor is the key concept in Smith's explanation of why and how nations become wealthy.⁶⁴ Some economists have criticized him for allegedly putting too much emphasis on the division of labor. Schumpeter, for example, affirms that "*nobody, either before or after A. Smith, ever thought of putting such a burden upon division of labor. With A. Smith it is practically the only factor in economic progress. (...) Technological progress, inventions of all those machines — and even investments — is induced by it and is, in fact, just an incident of it*" (Schumpeter, 1954, p. 187).

Schumpeter's critique, though, seems completely unfounded, since it does not take into account that the division of labor has to be the logical starting point for any theoretic analysis of trade, since all exchange relationships presuppose a specialization among individuals. There can be no exchange relationship without specialization and division of labor. Therefore, all the subsequent improvements of the productive powers of labor have to be considered as logical consequences of the division of labor. Smith refers to the causes for these improvements as followed:

"This great increase of the quantity of work, which, in consequence of the division of labour, the same number of people are capable of performing, is owing to three different circumstances; first, to the increase of dexterity in every particular workman; secondly, to the saving of the time which is commonly lost in passing from one species of work to another; and lastly, to the invention of a great number of machines which facilitate and abridge labour, and enable one man to do the work of many" (WN, I.i.5, p. 17).

If the improvement of the productive forces so critically depends on the division of labor, then upon what does the division of labor depend? Smith states in second chapter of Book I, which carries the title *Of the Principle which gives Occasion to the Division of Labor*, that it depends upon people's willingness to trade, barter and make deals, which is considered to be a general characteristic of human nature. Karl Marx, though, with his keen

⁶³ Myint (1958, 1977) argues that the vent-for-surplus theory remains relevant for developing countries.

⁶⁴ Smith starts the *Wealth of Nations* with the following statement: "*The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is any where directed, or applied, seem to have been the effects of the division of labour*" (WN, I.i.1, p. 13).

eye for spotting the inexorable hand of historically determined economic forces and circumstances behind the so-called natural laws, highlights the economic necessity of people living in modern societies to be reliant upon each other for the satisfaction of their material needs.

Thus, Smith's key proposition is that the further development of the division of labor is limited by the extent of the market.⁶⁵ What does he mean by the *extent of the market*? Perhaps one might think that he means a specific place or geographical zone where the commercial exchange is taking place. However, Smith always considers the market as a synonym for the exchange relations between individuals. These individuals — and not companies, countries, cities, economic blocs, or whatever artificial entities may have been created — exchange their labor force or their respective output in the marketplace. That these individuals usually work for different companies, which are eventually located in distant cities or countries, is circumstantial and of secondary importance. Every time two individuals agree to exchange something — regardless of the fact that they may exchange two or more commodities, commodities for money or their respective labor force —, they are carrying out a market transaction. Therefore, when we think about the market, we have to think always about the exchange relationships between individuals, wherever they might be located. The greatest extension of the market imaginable is if these exchange relationships involve all humankind. That would encourage the division of labor to the utmost.

The effective extent of the market also depends upon the existence of proper physical means of communication and transportation. Other things being equal, the more developed these means are, the more exchange is going to take place between people living in distant parts of the world. The current process of accelerated economic globalization can be seen as a consequence of the continued development of the means of communication and transportation during the last decades.

⁶⁵ Some authors, for example Young (1928), have erroneously paraphrased Smith by stating that the division of labor *depends* upon the extent of the market. This is, however, a tautological thought, since any increase in the division of labor is by definition also an extension of the market, because people specialize in certain activities in order to trade the product of their respective labor. Therefore, the division of labor depends as much upon the extent of the market as the latter depends upon the former.

While highly appreciating the great economic benefits of international trade, Smith succeeds in attributing to foreign exchange a more balanced and accurate role as an engine for increasing the wealth of the country than his predecessors. Unlike the mercantilists, who usually put too much emphasis on international trade, and the physiocrats, who normally belittle its importance, he is able to find the correct balance between these two extreme positions:

“The riches, and so far as power depends upon riches, the power of every country, must always be in proportion to the value of its annual produce, the fund from which all taxes must ultimately be paid. But the great object of the political economy of every country, is to encrease the riches and power of that country. It ought, therefore, to give no preference nor superior encouragement to the foreign trade of consumption above the home-trade, nor to the carrying trade above either of the other two. It ought neither to force nor to allure into either of those two channels, a greater share of the capital of the country than what would naturally flow into them of its own accord” (*WN*, II.v.31, p. 372).

The analysis presented so far is theoretically solid and widely uncontested. Only few economists would question the favorable effects of the division of labor on the development of the productive forces. In the next section, two important questions will be analyzed: (1) is it convenient for a country to import a certain amount of a specific commodity, despite being equally able to produce the same amount of the commodity at home? And (2), what are the economic gains for the importing country in such an exchange?

2.3 The Classical Rule for Specialization

Both questions have been successfully addressed by the formulation of a general rule of international specialization and trade. This rule states that “(...) *it pays to import commodities from abroad whenever they can be obtained in exchange for exports at a smaller real cost than their production at home would entail*” (Viner, 1937, p. 440). The economic gains from this international exchange can be measured by calculating the difference between the real costs of the exported commodities that have been sent in exchange for the imports, and the expected real costs of producing the imported commodities at home.

Viner labels this rule of specialization the *eighteenth-century rule*, after spotting it in the anonymous pamphlet *Considerations on the East-India Trade* of 1701, which is now attributed to English lawyer and journalist Henry Martyn.⁶⁶ Martyn applies the so-called eighteenth-century rule of specialization to refute charges that the East-India trade was costing jobs in England. To prove the point that this — or any other — international exchange of commodities could not destroy any profitable employment opportunities in England, Martyn complements the formulation of the rule of specialization with the following numerical example in chapter 10 of the *Considerations*:

“Then to imploy to Manufacture things in England, more Hands than are necessary to procure the like from India, is to imploy so many to no profit, which might otherwise be imploy’d to profit (...) If nine cannot produce above three Bushels of Wheat in England, if by equal Labour they might procure nine Bushels from another Country, to imploy these in agriculture at home, is to imploy nine to do no more work than might be done as well by three; (...) is the loss of six Bushels of Wheat; is therefore the loss of so much value” (Martyn, 1701, pp. 582-583).

According to the numerical example, England gains the labor of six men by importing wheat from India. Martyn freely admits that international trade results in the displacement of labor from industries that cannot compete with imports; he correctly transforms, though, this apparent drawback into a virtue by observing that the displaced labor is thereby freed to find more productive employment elsewhere in the economy (Maneschi, 2002, p. 237). According to Martyn, no employment opportunities that are worth keeping in the first place are lost due to international trade. By forcing its citizens — either by import prohibitions or high customs — to consume English instead of Indian manufactures in order to secure the jobs of the people actually employed in producing them, England would only oblige the commodities “(...) to be provided by the Labour of many, which might as well be done by few” (Martyn, 1701, p. 584).

Martyn repeatedly refers to the similarity between foreign trade and technological progress in terms of their potential effect on employment: both may lead to an initial increase in unemployment. The point he wants to make is obvious: those who advocate against free trade because of the displacement-of-labor-effect should also advocate for the destruction of all labor saving devices.

⁶⁶ For Martyn’s likely authorship, see MacLeod (1983).

The mutually beneficial nature of the international exchange is secured by applying the rule of specialization for both parties simultaneously. If circumstances change in a way that the general rule of specialization cease to be valid for at least one of the two countries, this country would ultimately withdraw from this particular exchange and start producing the imported commodities at home.

Smith applies the same rule of specialization in the following paragraph of the *Wealth of Nations*:

“If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage. The general industry of the country, being always in proportion to the capital which employs it, will not thereby be diminished, no more than that of the above-mentioned artificers; but only left to find out the way in which it can be employed with the greatest advantage. It is certainly not employed to the greatest advantage, when it is thus directed towards an object which it can buy cheaper than it can make. The value of its annual produce is certainly more or less diminished, when it is thus turned away from producing commodities evidently of more value than the commodity which it is directed to produce. According to the supposition, that commodity could be purchased from foreign countries cheaper than it can be made at home. It could, therefore, have been purchased with a part only of the commodities, or, what is the same thing, with a part only of the price of the commodities, which the industry employed by an equal capital, would have produced at home, had it been left to follow its natural course. The industry of the country, therefore, is thus turned away from a more, to a less advantageous employment, and the exchangeable value of its annual produce, instead of being increased, according to the intention of the lawgiver, must necessarily be diminished by every such regulation” (*WN*, IV.ii.12, p. 457).

Martyn’s statement of the rule of specialization might be seen in some way superior to Smith’s, because the later does not offer a quantitative analysis of the gains from international trade. Smith, though, applies the rule not only to the context of international trade, but also to state the gains from trade between individuals⁶⁷ and between cities and countryside.⁶⁸ Therefore, it is safe to affirm that Smith views it as the general rule of specialization in any kind of trade. There is actually no sound reason to suppose that the logic behind specialization is altered by the geographic location of individuals, nor that

⁶⁷ See Smith’s example of the tribe of shepherds and hunters (*WN*, I.ii.3, p. 27).

⁶⁸ See Smith (*WN*, III.i.1, p. 376).

the beneficial effects of trade on the productive forces of labor have to end at the political — i.e. artificial — borders of a country.

An avid reader may discover that implicit references to the rule of specialization are ubiquitous in the classical political economy. Three decades after the publication of the *Wealth of Nations*, James Mill and Robert Torrens make use of this general rule when writing against William Spence's *Britain Independent of Commerce* (1807), a work occasioned by the French blockade of Britain of 1806. Spence drew on the Physiocrats — which were called *the economists* in that time — to make the point that since a nation's agriculture is the source of its wealth, a blockade of trade could not hurt the British economy. Thus, according to Spence, his fellow citizens had no reason to fear from Napoleon's Continental Blockade. In order to refute both Spence and the Physiocrats, and to highlight the economic benefits of international trade, Mill and Torrens formulate numerical examples that are merely variations of the rule of specialization used before by Martyn and Smith.⁶⁹

Torrens indicates rather precisely how to measure the advantage from international trade in *The Economists Refuted* (1808):

(...) if I wish to know the extent of the advantage, which arises to England, from her giving France a hundred pounds of broad cloth, in exchange for a hundred pounds of lace, I take the quantity of lace which she has acquired by this transaction, and compare it with the quantity which she might, at the same expense of labour and capital, have acquired by manufacturing it at home. The lace that remains, beyond what the labour and capital employed on the cloth, might have fabricated at home, is the amount of the advantage which England derives from the exchange (Torrens, Vol. VI, p. 53).

James Mill's reply to William Spence, *Commerce Defended* (1808) contains the following quantitative analysis of the gains from trade:

On making a ton of iron in Great Britain, let us suppose, that the labourers, etc. employed [...] have consumed ten quarters of corn. [...] Let us suppose, that in the preparation of a certain quantity of British manufactures, nine quarters of corn have been consumed; and let us suppose, that this quantity of goods will purchase in the Baltic a ton of iron, and afford, besides, the expence requisite for importing the iron into Britain. Is there not an evident saving of a quarter of corn, in the acquisition of this ton of iron? Is not the country one quarter of corn the richer, by

⁶⁹ See Thweatt (1976, pp. 209-212).

means of its importation? In the importation of a thousand such tons, is it not a thousand quarters richer (Mill, 1808, pp. 36-37)?

Aldrich (2004, p. 382) states succinctly the differences between the two approaches for the quantification of the gains from international trade:

“Mill treats the gain from opening trade, Torrens the loss from closing it; Mill measures the gain by the saving in inputs when the consumption level is given, Torrens the loss in consumption when the input level is given.”

Even Ricardo, who has been credited in the economic literature for formulating the comparative-advantage rule of specialization in chapter 7 of the *Principles*, repeatedly applies the same rule used by Martyn, Smith, James Mill and Torrens in other passages of that book:

“The motive which determines us to import a commodity, is the discovery of its relative cheapness abroad: it is the comparison of its price abroad with its price at home. If a country exports hats, and imports cloth, it does so because it can obtain more cloth by making hats, and exchanging them for cloth, than if it made the cloth itself” (Vol. I, p. 170).⁷⁰

As has been demonstrated by these examples, the so-called eighteenth-century rule of specialization was still popular and widely used by the leading thinkers of political economy at the beginning of the nineteenth century. Despite the differences in the formulation of the quantitative gains from trade, they all applied the same rule of specialization in international trade. Therefore, it seems appropriate to label it the *classical rule of specialization*, in substitution of the denomination proposed by Viner.

The only possible objection to the new denomination seems to be the fact that the classical rule of specialization has been overshadowed by the comparative-advantage rule of specialization in international trade — which Viner calls the *nineteenth-century rule* — in modern economic literature. The next section will deal in detail with this objection, offering a new interpretation of Ricardo’s numerical example that is in correspondence with the classical rule of specialization.

⁷⁰ See also Ricardo (Vol. I, p. 264; p. 295 and p. 319).

2.4 Ricardo's Notion of Comparative Advantage

Simplicity is the ultimate sophistication.

Leonardo da Vinci

2.4.1 The Numerical Example

It is a widely recommended — and regretfully not always followed — practice in scientific research to consult the primary source for the understanding of a complex concept or theory. The reliance on secondary sources, whatever valuable and prestigious they might be, always bears the danger of misinterpreting the original thinker. This potential danger is widely increased when the researcher decides to rely exclusively on secondary sources. By following this approach — which cannot be considered a truly scientific practice —, generations of scholars unconsciously reproduce and perpetuate the possible distortions and errors made by earlier interpreters of the original author.

The excessive reliance on secondary sources seems to have been the standard practice regarding comparative advantage. This concept has been generally explained with the help of a simple mathematic model called the *Ricardian model*, which has replaced Ricardo's original statement as the primary source of explanation. I will not follow this often-transit path, taking Ricardo's own exposition of the numerical example in the *Principles* as the legitimate and foremost source for interpreting comparative advantage.

The original version of the numerical example is contained in six paragraphs of the *Principles*. In order to have the original wording of the example at hand, it will be reproduced here in its entire length. The paragraphs are numbered to facilitate a quick and precise reference. Ricardo states:

- (1) "If Portugal had no commercial connexion with other countries, instead of employing a great part of her capital and industry in the production of wines, with which she purchases for her own use the cloth and hardware of other countries, she would be obliged to devote a part of that capital to the manufacture of those commodities, which she would thus obtain probably inferior in quality as well as quantity.
- (2) The quantity of wine which she shall give in exchange for the cloth of England, is not determined by the respective quantities of labour devoted to the production of each, as it would be, if both commodities were manufactured in England, or both in Portugal.

- (3) England may be so circumstanced, that to produce the cloth may require the labour of 100 men for one year; and if she attempted to make the wine, it might require the labour of 120 men for the same time. England would therefore find it her interest to import wine, and to purchase it by the exportation of cloth.
- (4) To produce the wine in Portugal, might require only the labour of 80 men for one year, and to produce the cloth in the same country, might require the labour of 90 men for the same time. It would therefore be advantageous for her to export wine in exchange for cloth. This exchange might even take place, notwithstanding that the commodity imported by Portugal could be produced there with less labour than in England. Though she could make the cloth with the labour of 90 men, she would import it from a country where it required the labour of 100 men to produce it, because it would be advantageous to her rather to employ her capital in the production of wine, for which she would obtain more cloth from England, than she could produce by diverting a portion of her capital from the cultivation of vines to the manufacture of cloth.
- (5) Thus England would give the produce of the labour of 100 men, for the produce of the labour of 80. Such an exchange could not take place between the individuals of the same country. The labour of 100 Englishmen cannot be given for that of 80 Englishmen, but the produce of the labour of 100 Englishmen may be given for the produce of the labour of 80 Portuguese, 60 Russians, or 120 East Indians. The difference in this respect, between a single country and many, is easily accounted for, by considering the difficulty with which capital moves from one country to another, to seek a more profitable employment, and the activity with which it invariably passes from one province to another in the same country.
- (6) It would undoubtedly be advantageous to the capitalists of England, and to the consumers in both countries, that under such circumstances, the wine and the cloth should both be made in Portugal, and therefore that the capital and labour of England employed in making cloth, should be removed to Portugal for that purpose. In that case, the relative value of these commodities would be regulated by the same principle, as if one were the produce of Yorkshire, and the other of London: and in every other case, if capital freely flowed towards those countries where it could be most profitably employed, there could be no difference in the rate of profit, and no other difference in the real or labour price of commodities, than the additional quantity of labour required to convey them to the various markets where they were to be sold” (Vol. I, pp. 134-136).

The four numbers introduced by Ricardo in the third and forth paragraphs have been traditionally interpreted as the amounts of labor needed to produce a single unit of cloth

and wine in England and Portugal or, in other words, as unit labor coefficients in the production of these commodities in each country.⁷¹ But Ruffin (2002) convincingly argues that Ricardo's numbers are not unit labor coefficients, but rather the quantities of labor needed to produce the amounts of wine and cloth actually traded by England and Portugal.

After a careful reading of the six paragraphs, it is indeed very difficult to support an interpretation different from Ruffin's.⁷² The new interpretation is strongly backed by Ricardo's own wording, since it is consistent with the use of the terms *the cloth* and *the wine* in the third and fourth paragraph, which refer to the *quantity of wine which she shall give in exchange for the cloth of England* mentioned in the second paragraph. It also offers a plain explanation for why Ricardo does not specify the units of measurement for each commodity: it is simply not relevant for the numerical example he is presenting; all what counts is that a certain amount of English cloth is currently exchanged for a certain amount of Portuguese wine.

If the numbers were meant to be unit labor coefficients, than Ricardo would have missed to specify not only the units of measurement, but also the terms of trade between the two commodities. Apart from these omissions, the real labor costs indicated by him for the production of a single unit of these commodities would seem grossly exaggerated, since the work of 80 men for a whole year is a lot of labor for producing a liter or even a hectoliter of wine.

According to Ruffin's interpretation, an accurate representation of Ricardo's numerical example in a table would have to be like this:

⁷¹ Perhaps being Sraffa (1930, p. 541) the single exception who interprets Ricardo's numbers accurately.

⁷² Before reading Ruffin's paper, Maneschi wrote an entire book about comparative advantage, presenting, like so many others, the traditional interpretation of Ricardo's example. After reading the paper, he immediately adhered to the new interpretation, calling it "(...) *the first clear interpretation of the meaning of the four magic numbers*" (Maneschi, 2004, p. 435). To verify this rather unusual conversion, see Maneschi (1998, 2004).

	Number of men working for a year required to produce a given quantity of cloth and wine traded	
	cloth	wine
England	100	120
Portugal	90	80

Table 1: Ricardo's Numerical Example

If Ricardo would have presented the numerical example in a mathematical language — as he would have probably done if he were a contemporary economist and could have anticipated the nearly two centuries of misinterpretation of his example —, he would have formulated his statement of comparative advantage very similar to this: Let X be the quantity of cloth that is actually traded by England for Y units of wine from Portugal. England requires 100 men for one year to make the X units of cloth and 120 men to make the Y units of wine, while Portugal requires only 90 men to produce the X units of cloth and 80 men for the Y units of wine. Under the assumption of factor immobility between the two countries, it follows that England would find it in her interest to participate in this international exchange since it saves the labor of 20 men by importing the wine and paying for it with the exportation of cloth. Portugal is also interested in the exchange because it saves the labor of 10 men by importing the cloth from England and purchasing it with its wine-exports. It is important to notice that Portugal also gains by this transaction, notwithstanding the fact that it has an absolute real cost advantage over England in the production of the x -amount of cloth as well as the y -amount of wine subject to exchange.

The reason for the failure of many economists to correctly understand Ricardo's numerical example has not to be found in his formulation of the numerical example, but in the shortcomings of his numerous interpreters. They have failed to establish the correct cost comparisons, as the following section will show.

2.4.2 The Cost Comparisons according to Ricardo

As stated in the precedent section, Ricardo does not built his numerical example upon unitary labor costs, but the real labor costs necessary to produce the amounts of cloth and wine currently traded by Portugal and England. Then, he proceeds to establish two distinct cost comparisons between the four magic numbers, each of these comparisons responding to different purposes.

The first cost comparison is between the real labor costs in the same country for the amounts of cloth and wine currently traded between England and Portugal. More precisely, he compares the cost of obtaining a certain amount of a commodity from another country with the real labor costs of producing the same amount internally. The cost of the imported commodities always consists in the real labor costs embodied in the commodities that the country needs to export in order to pay for its imports.

By establishing this kind of cost comparison, Ricardo is merely applying the classical rule for specialization. As has been already stated, this rule stipulates that it is beneficial to import commodities from abroad whenever the country can obtain them in exchange for exports whose production entails less real cost than the production of the same amount of the imported commodities at home. According to this rule, therefore, a country following a free trade policy would obtain all the different commodities it consumes at the lowest possible real costs, by either producing them at home or importing them. This constitutes the main gain and advantage of free trade between countries.

The denomination that Viner has proposed for this cost comparison, though, is highly misleading, because it suggests that the eighteenth-century rule has been replaced by another rule later in the nineteenth century. That was indeed Viner's erroneous view. He believed that Ricardo had formulated the nineteenth-century rule for specialization in international commerce. However, Ricardo did not propose an alternative rule of specialization, but applied the same rule as his predecessors. Thus, there has been only one consistent rule of specialization throughout the classical school of economic thought. Consequently, it should not be called the eighteenth-century rule, but the *classical rule for specialization*.

That being said, it would be wrong to ignore the innovations in Ricardo's statement of the classical rule of specialization. All previous formulations lack a crucial point: For

an international exchange to actually take place, it has to be considered a mutually beneficial transaction for the two countries involved. Therefore, the rule of specialization has to be applied simultaneously for each of the participating countries. This requires an indication of each country's real labor costs (or inputs) for the quantities of the commodities exchanged. It took the keener mind of Ricardo to express the rule for specialization in international trade with the highest level of sophistication, eliminating this shortcoming of his predecessors.

It is also important to realize that Ricardo considers the classical rule for specialization as the dominant cost comparison, since it establishes the gains from trade and therefore the interest of the country in participating in the exchange without bothering about another cost comparison. The later confusion with respect to this crucial issue is somehow surprising, since Ricardo applies the classical rule for specialization in the third paragraph to establish England's comparative advantage in cloth independently from Portugal numbers. He proceeds then to apply the rule for Portugal in the fourth paragraph. Only after the respective comparative advantages of England (cloth) and Portugal (wine) are established — and therefore their particular interest in the exchange —, he proceeds to compare the real labor costs between the two countries in the second part of the fourth paragraph.

James Mill, a close friend and collaborator of Ricardo, reaffirms with clarity the dominant cost comparison when he states in his *Elements of Political Economy* (1826, p. 123):

“When a country can either import a commodity or produce it at home, it compares the cost of producing at home with the cost of procuring from abroad; if the latter cost is less than the first, it imports. The cost at which a country can import from abroad depends, not upon the cost at which the foreign country produces the commodity, but upon what the commodity costs which it sends in exchange, compared with the cost which it must be at to produce the commodity in question, if it did not import it.”

Five decades later, Cairnes is only repeating Mill's statement when he writes:

“(...) when it is said that international trade depends on the difference in the comparative, not the absolute, cost of producing commodities, the costs compared are the costs in each country of the commodities which are the subject of exchange, not the different costs of the same commodity in the exchanging countries” (Cairnes, 1967, p. 312).

However, Cairnes is severely criticized by Viner (1937) and Chipman (1965) for his correct statement of the dominant cost comparison, whereas James Mill's equivalent

statement remains unchallenged. Viner (1937, p. 438f) intends to refute Cairnes by pointing out that the comparison has to be made between cost ratios, not costs, and therefore he believes that “(...) *it is unessential whether the cost ratios which are compared are the ratios between the costs of producing different commodities within the same countries or the ratios between the costs of producing the same commodities in different countries.*”

Chipman (1965, p. 480) expresses the same objection in algebraic terms:

“In other words — Cairnes seems to be saying — if among four positive quantities, the relation $a'/b' < a''/b''$ holds, this must not be confused with the relation $a'/a'' < b'/b''$; but as any high school student ought to know, the two inequalities are mathematically equivalent.”

Both Viner and Chipman are right about the mathematical equivalence of the two inequalities, but they are mistaken by establishing a comparison of *cost ratios* in the first place. The comparison of cost ratios is a direct consequence of taking the unitary cost of the commodities as the starting point for establishing a comparative advantage in a specific commodity, since under such an unfortunate logical construction no other kind of cost comparison can be established in order to make a meaningful statement. The mere fact that the unitary real cost of a commodity is lower with respect to another, without explicitly establishing the rate of exchange between the two goods, is hardly a sufficient criterion for producing the commodity at home rather than importing it. Ricardo avoids this error by directly taking the real labor costs for the amounts of the two commodities traded, instead of their respective unitary real costs.

Even the most skeptical scholar would have to agree that the cost comparison within a country is the dominant cost comparison if confronted with a passage in which Ricardo himself explicitly rejects the comparison of real costs between countries, declaring it irrelevant for the assessment of comparative advantage. Well, this is exactly what Ricardo does when commenting Malthus' *Principles of Political Economy*.⁷³ Malthus (1989, p. 428) credits as a factor contributing to the prosperity of the United States her ability to

⁷³ Viner brings up this quote, as well as many other important insights, which have been very helpful for arriving to the new interpretation of Ricardo's meaning of comparative advantage. The reason why Viner fails to draw the same conclusions from them is that he was not aware of the erroneous interpretation of Ricardo's numbers as unitary labor costs.

sell “(...) *raw produce, obtained with little labor, for European commodities which have cost much labor.*” Referring to this phrase, Ricardo (Vol. II, p. 383) writes the following footnote:

“It can be of no consequence to America, whether the commodities she obtains in return for her own, cost Europeans much, or little labor; all she is interested in, is that they shall cost her less labor by purchasing them than by manufacturing them herself.”

To further illustrate the supremacy of the cost comparison within a country for the assessment of comparative advantage, let us go back to Ricardo’s numbers and introduce a single change, represented in bold:

	Number of men working for a year required to produce a given quantity of cloth and wine traded	
	cloth	wine
England	100	120
Portugal	110	80

Table 2: Ricardo’s Modified Numerical Example

The change consists in increasing the number of men working for a year required to produce the amount of cloth traded in Portugal from 90 to 110. Such an increase amounts to revoking Portugal’s real cost advantage in cloth with regard to England. Despite the change introduced, this international exchange between England and Portugal would take place, since both countries continue to be interested in it. Actually, Portugal is now even more interested in the exchange, since it gains the labor of 30 men instead of the 10 men in the original example.

Therefore, when it is said that international trade depends on comparative advantage, the relevant cost comparison is between real labor costs within a country, and not between countries. Unfortunately, the erroneous interpretation of Ricardo’s numbers as unitary labor costs has led to the mistake of establishing a comparison of real costs and relative cost advantages between countries for the assessment of a comparative advantage in the production of certain commodities. For Ricardo, comparative advantage

has always resulted from the comparison of real costs between home-production and importing, as the classical rule for specialization suggests.

Without diminishing the relevancy of the dominant cost comparison, it is important to realize that Ricardo's truly innovative insights are the result of comparing the real costs between the two countries. An explanation will be given in the next section.

2.4.3 Ricardo's New Propositions

After applying the classical rule for specialization for England and Portugal respectively, the comparison of real costs between the two countries reveals that Portugal might import a certain amount of cloth from England although the former has a real labor cost advantage over the latter in producing the amount of the commodity traded at home. Ricardo refers to this new proposition in the fourth paragraph of the extensive quote, when he states: "*This exchange might even take place, notwithstanding that the commodity imported by Portugal could be produced there with less labour than in England.*"

Every interpreter of comparative advantage has highlighted the above proposition. Because of the misinterpretation of Ricardo's numerical example, there have been some misunderstandings regarding the importance of this proposition. A symptomatic indication of the present state of confusion is the prolific denominations that scholars have attached to it. For some economists, it is the *law* of comparative advantage, while others regard it as a mere *rule*; a third group declares it a *theory*, whereas another group calls it a *doctrine*. The majority of scholars have used all these different denominations simultaneously without even bothering about the different meanings. This is an unacceptable practice for a science whose practitioners like to consider as the most precise branch of the social sciences.

If Ricardo's new proposition is neither a principle nor an economic law, as I am suggesting, then what is it instead? Viner is fundamentally right when calling it a mere addition or possible implication of the classical rule for specialization. Indeed, this rule is both compatible and indifferent with respect to real cost advantages between countries, since they are not relevant for establishing the interest of a country in international trade. Understandably, Ricardo refers to this proposition only once and merely in passing.

Ricardo's numerical example contains a second proposition that has been scarcely mentioned in the prolific economic literature about comparative advantage. In order to bring it back to light, it is necessary to continue the fruitful practice of consulting the *Principles* as the primary source for the interpretation of Ricardo's numerical example.

In the fifth paragraph of our extensive quote, Ricardo writes:

“Thus England would give the produce of the labour of 100 men, for the produce of the labour of 80. Such an exchange could not take place between the individuals of the same country. The labour of 100 Englishmen cannot be given for that of 80 Englishmen, but the produce of the labour of 100 Englishmen may be given for the produce of the labour of 80 Portuguese, 60 Russians, or 120 East Indians.”

This passage is evidently connected to the second paragraph, where he states:

“The quantity of wine which she shall give in exchange for the cloth of England, is not determined by the respective quantities of labour devoted to the production of each, as it would be, if both commodities were manufactured in England, or both in Portugal.”

Ricardo is therefore referring not once but twice to a new proposition he has stated some paragraphs before the extensive quote, namely that “*the same rule which regulates the relative value of commodities in one country, does not regulate the relative value of the commodities exchanged between two or more countries*” (Vol. I, p. 133).⁷⁴

If Ricardo's words and repeated references are to be taken seriously, then it seems absolutely clear that the whole purpose of his numerical example is to prove the new proposition that the law of value for domestic transactions does not hold for international exchanges. Hence, his labor theory of value cannot be relied on as a valid guide for the determination of international prices under the condition of immobility of the factors of production.

Neoclassical economists have omitted the second proposition, although it is indispensable for proving the first proposition. Without the insight regarding the non-appliance of the law of value in international transactions, the affirmation that countries do not need to have an absolute real labor cost advantage in a particular commodity — or the exclusive capacity to produce it — in order to participate in international trade would

⁷⁴ Aldrich (2004, p. 385) considers this sentence rightly as the beginning of the *comparative-advantage section*.

seem not only counterintuitive, but also in contradiction with the labor theory of value. Let us explain this important point with the help of a numerical example that is in accordance with the labor theory of value:

	Number of men working for a year required to produce a given quantity of cloth and wine traded	
	cloth	wine
England	80	120
Portugal	90	80

Table 3: Numerical Example in Accordance with the Law of Value

In the above numerical example, the quantity of men needed to produce the cloth in England has been reduced from 100 to 80 men, so that the same amount of labor is embodied in the exchange of English cloth and Portuguese wine, which is a mandatory assumption under the labor theory of value. For Portugal to remain interested in importing cloth from England, the quantity of labor needed to produce the cloth at home has to be higher than 80. Otherwise, Portugal could save some labor and would be better off with home production. However, if the quantity of labor for producing the cloth in Portugal is indeed above 80 men, then it has no real labor cost advantage in the production of cloth over England anymore. Therefore, the proposition about the non-appliance of the law of value between countries under the assumption of labor immobility is indeed critical for the logical construction of Ricardo's numerical example, and for demonstrating that a country would import a commodity despite having a real cost advantage over the exporting country.

A book often functions like a mirror: it lets readers only understand and appreciate what they already have in mind. Neoclassical economists have omitted Ricardo's unambiguous statement about the law of value because they reject his labor theory of value. Instead, they have interpreted Ricardo's numerical example as the enunciation of a new principle or law leading to free trade, which is certainly not the case.

Ricardo himself never claimed to have discovered a new principle or law called *comparative costs* or *comparative advantage*. Although he mentions the word *principle* in the paragraph immediately following the announcement quoted above, it is necessary, again, to read the whole paragraph in order to interpret Ricardo correctly. He states:

“Under *a system of perfectly free commerce*, each country naturally devotes its capital and labour to such employments as are most beneficial to each. This pursuit of individual advantage is admirably connected with the universal good of the whole. By stimulating industry, by rewarding ingenuity, and by using most efficaciously the peculiar powers bestowed by nature, it distributes labour most effectively and most economically: while, by increasing the general mass of productions, it diffuses general benefit, and binds together by one common tie of interest and intercourse, the universal society of nations throughout the civilized world. It is *this principle* which determines that wine shall be made in France and Portugal, that corn shall be grown in America and Poland, and that hardware and other goods shall be manufactured in England” (Vol. I, pp. 133-134; emphasis added).

With *this principle*, Ricardo is referring of course to the *system of perfectly free commerce* at the beginning of the paragraph — not to a new principle that he would introduce afterwards.⁷⁵ According to Ricardo’s exposition, the observance of the principle of free trade would naturally lead to a certain degree of specialization among nations, which is mutually beneficial since it would turn each nation more productive than without such an exchange.

Ricardo does not consider the second proposition to be a new economic principle or law, because his claim is a negation (Aldrich, 2004, p. 388). As already said, all what he intends to back up with the *four magic numbers* is that the law of value *does not* regulate international prices. Does he elaborate a new rule for the determination of prices in international transactions? Yes, he does. Aldrich (2004, p. 388) spots the rule in chapter XXVIII of the *Principles, On the Comparative Value of Gold, Corn and Labour in Rich and Poor Countries* (Vol. I, p. 375), when Ricardo states:

“(...) the natural price [the money cost of production] of commodities in the exporting country (...) ultimately regulates the prices at which they shall be sold (...) in the importing country.”

⁷⁵ Here I disagree with Ruffin (2002, p. 741-742) who believes that Ricardo would announce the principle later. Ruffin also repeatedly refers to the *law* of comparative advantage.

After taking a closer look at chapter seven of the *Principles*, though, it appears to me that Ricardo already establishes this rule for the determination of prices in international transactions right after the numerical example when he states that “(...) *cloth cannot be imported into Portugal, unless it sell there for more gold than it cost in the country from which it was imported; and wine cannot be imported into England, unless it will sell for more there than it cost in Portugal*” (Vol. I, p. 137). Then, he applies the rule rather consistently to the monetary analysis following an improvement in English winemaking that has made the existing trade unprofitable (Vol. I, pp. 137-42).

Ricardo’s two propositions are not laws or principles that lead to free trade. Nevertheless, they do render an invaluable service for the free trade case. Before Ricardo’s numerical example, economists believed that all commodities would necessarily tend to be produced in the locations where their real costs of production were lowest; if a country had the lowest real labor costs in producing all kind of commodities, it would, therefore, have no interest in engaging in international trade at all. Ricardo’s first proposition refute all these previously prevalent opinions, demonstrating that every country, no matter how rich or poor, has the chance to participate, under favorable terms, in international trade, because they all become more productive.⁷⁶

The second proposition explains why higher real labor costs in the poorer countries do not command higher prices for their products in international markets. Although poorer countries usually have higher real labor costs compared to the wealthy countries, because their labor force is in general less productive, they have, for the same reason, inferior nominal costs in certain productions due to their lower salaries. This lack of correspondence of real and nominal costs between countries, which contradicts Ricardo’s law of value, can be easily explained by the non-appliance of this law in international trade under the condition of immobility of the factors of production.

With the accurate identification and interpretation of Ricardo’s propositions in mind, it is possible to prove that the most critical objections raised against him are baseless and a direct result of the misinterpretation of his numerical example.

⁷⁶ See Viner (1937, p. 441).

2.4.4 Some Charges against Ricardo Refuted

2.4.4.1 *The Gains from Trade in Ricardo's Numerical Example*

Ricardo has been repeatedly accused of carelessness and logical inconsistency in the formulation of his famous numerical example. Chipman (1965, p. 480), in particular, criticizes him for announcing the terms of trade just in the fifth paragraph of the extensive quote from the *Principles* without ever explaining its determination.

Chipman's accusation of logical inconsistency is routed, of course, in the erroneous interpretation of the numbers as unitary labor costs. The accurate interpretation of the numbers absolves Ricardo — the *master logician of political economy* (Maneschi, 2004, p. 435) — from the charges of logical inconsistency and carelessness. By stipulating in the second paragraph that certain quantities of wine and cloth are currently exchanged between Portugal and England, Ricardo actually starts his numerical example with the terms of trade. Then he goes on to specify the amount of labor needed to produce these quantities in both countries, so that each trading partner gains from trade and therefore has independently from the other an interest in pursuing that exchange. The fact that England uses 100 men to produce the cloth she needs to export in order to pay for the imported wine, whereas she would need 120 men to produce the same quantity of wine at home, immediately establishes her comparative advantage in cloth without requiring any knowledge of Portugal's labor inputs. Likewise, Portugal's comparative advantage in wine is established by her requiring 80 men to produce enough wine to pay for the cloth that she would otherwise produce at home with the labor of 90 men.

Ricardo's decision to build the numerical example on an international exchange that is already taking place between Portugal and England is consistent with the main purpose of any international trade theory: to explain the current pattern of international trade. In addition to this, as Ruffin (2002, p. 742) correctly points out, this logical construction is valid for any number of commodities and countries.

Besides the unfounded charge of logical inconsistency, the foremost reason for complaint regarding Ricardo's formulation of comparative advantage is that he allegedly fails to specify the gains from trade and the proportion in which these gains are divided between England and Portugal. John Stuart Mill raised this critical point for the first time — although in a very respectful and apologetic way towards Ricardo —, in his *Essays on*

Some Unsettled Questions of Political Economy of 1844 (Mill J. S., 1996). This alleged failure by Ricardo is a recurrent reference for all of his critics, and one of the main reasons why John Stuart Mill is regarded as something more than a mere popularizer of comparative advantage.

However, it is important to realize that J. S. Mill takes as basis for his critical remark the numerical example contained in the *Elements*, his father's textbook, and not the numerical example included in the *Principles*, actually creating the precedent of interpreting and correcting Ricardo based on James Mill's example.⁷⁷ With the accurate interpretation of Ricardo's numerical example, it is easy to prove that the alleged *oversight* — to use J. S. Mill's term (Mill J. S., 1996, p. 236) — has only existed in J. S. Mill's mind.

Ricardo indicates rather precisely the gains from trade for each country, which are the result of a simple subtraction. For England, the gains from trade are given by the difference between the number of men — 100 — she currently employs to produce the quantity of cloth exported to pay for the importation of wine, and the number of men she would need — 120 — to produce the wine internally. In Portugal's case, the gains from trade are obtained by subtracting the number of men — 80 — she currently employs to produce the quantity of wine exported to pay for the importation of cloth, from the number of men she would need — 90 — to produce the cloth internally. England saves the labor of 20 men, whereas Portugal saves the labor of 10 Portuguese. The additional quantity of commodities or services that these saved men could produce would be the gains from trade in terms of an increase in the amount of commodities and services available.

It seems to be an odd or extravagant decision that Ricardo decides to formulate his numerical example selecting Portugal as the superior nation in the production of both commodities, although he is writing in the heyday of England's industrial revolution. Samuelson (1969, p. 5) explains this peculiar economic geography with Ricardo's desire to prove his readers that a foreign country could not undersell England in everything

⁷⁷ Sraffa (1930, p. 541-542) indicates a plausible explanation for J. S. Mill's flaw when pointing out that perhaps he "(...) thought that his father had followed Ricardo so closely and faithfully, that anything which the former had said in the *Elements* could safely be attributed to the later."

even if the former is more productive in producing every commodity. Probably. But in addition to this explanation it is also plausible that Ricardo wanted to present England as the greater beneficiary of free trade, since — although having an absolute real cost disadvantage in both commodities — she would save the labor of more men and therefore obtain higher gains from this international exchange than Portugal.

2.4.4.2 The Constant-Labor-Costs Assumption

In addition to the complications in relation with the calculation of the gains from trade, the erroneous interpretation of Ricardo's numbers as unitary labor costs has also led to the introduction of the assumption of constant labor costs. With the past of time, this assumption has turned into a recurrent feature of mainstream international trade models.

The constant-labor-cost assumption has been rightfully regarded as the most unreasonable assumption for any kind of trade model, since the greatest benefit of trading commodities and services consists in the encouragement of specialization and mass production, which necessarily lead to gains in labor productivity, increasing returns to scale and decreasing real and nominal labor costs per unit. These beneficial effects could be largely increased by engaging in commerce at an international scale because of the greater extension of the market. Therefore, it is perfectly understandable that an economist who builds up his/her case in favor of international free trade on a theoretic trade model that leaves precisely these benefits out will hardly convince anybody about the virtues of international trade.

Having said this, I could not find in chapter seven of the *Principles* — or in any other chapter of this book — an explicit or implicit reference to constant labor costs in connection with international trade. This assumption made its entrance into international trade theory by the backdoor, being James Mill, not Ricardo, the one who let it in by formulating his explanation of comparative advantage in the *Elements* with unitary labor costs. Because of the fact that countries usually trade more than a single unit of a commodity, later economists have assumed that the unitary costs indicated remain constant. Moreover, since it was mostly from Mill's textbook and J. S. Mill's later remarks that the economic profession has learned Ricardo's comparative-advantage example, the constant cost assumption has been erroneously associated with the later.

Aldrich (2004, p. 382) is apparently aware about the true origin of the constant labor cost assumption — Mill's numerical example and not Ricardo's. Nevertheless, he affirms a few pages later that in Ricardo's example "(...) *trade between Portugal and England would not take place if English and Portuguese labor had to exchange at parity; if, say, England's cloth consignment were reduced by one-fifth so that its labor content equaled that of Portugal's wine consignment, Portugal would withdraw from the trade. Ricardo does not draw this conclusion, but perhaps he thought the reader would*" (Aldrich, 2004, p. 388).

Ricardo does not draw the above conclusion, because it is only valid under the constant-cost assumption. In order to Portugal to withdraw from the exchange under this modified terms of trade, her real labor costs for the new quantity of cloth traded should be equal or below 80 men, the labor costs for the quantity of wine she needs to export in order to pay for the imports. If Portugal's real labor costs for producing the cloth at home are also reduced by a fifth ($90 - 18 = 72$ men), she would certainly retreat from the trade, but such a proportional cost reduction implies the assumption of constant labor costs. Ricardo never made such an assumption.⁷⁸

The reinterpretation of Ricardo numerical example necessarily leads to the dismissal of the constant-labor-cost assumption as a dominant feature of the classical theory of international trade. This dismissal has far-reaching consequences for the case in favor of free trade. Economies of scale, formerly banned from Ricardo's comparative-advantage insight due to the presence of the constant-labor-costs assumption, now can be easily integrated. Critical points directly raised against the dismissed assumption, like the well-known *Graham's Paradox*⁷⁹, all of a sudden become irrelevant with regard to Ricardo's original statement of comparative advantage.

Perhaps the most important consequence of the dismissal of constant labor costs is that it brings light on Ricardo's dynamic view on the pattern of international trade. If

⁷⁸ If Portugal needs more than 80 men for producing the new quantity of cloth traded, she would lose her real labor cost advantage in cloth with respect to England, but she would still be interested in the exchange.

⁷⁹ See Graham (1923).

the researcher reads beyond the six paragraphs quoted, then he or she will encounter the following passage of the *Principles*:

“If the trade were purely a trade of barter, it could only continue whilst England could make cloth so cheap as to obtain a greater quantity of wine with a given quantity of labour, by manufacturing cloth than by growing vines; and also whilst the industry of Portugal were attended by the reverse effects. Now suppose England to discover a process for making wine, so that it should become her interest rather to grow it than import it; she would naturally divert a portion of her capital from the foreign trade to the home trade; she would cease to manufacture cloth for exportation, and would grow wine for herself” (Vol. I, p. 137).

A few pages later, he writes:

“England exported cloth in exchange for wine, because, by so doing, her industry was rendered more productive to her; she had more cloth and wine than if she had manufactured both for herself; and Portugal imported cloth and exported wine, because the industry of Portugal could be more beneficially employed for both countries in producing wine. Let there be more difficulty in England in producing cloth, or in Portugal in producing wine, or let there be more facility in England in producing wine, or in Portugal in producing cloth, and the trade must immediately cease” (Vol. I, p. 140).

These paragraphs are the best prove that Ricardo had no static approach regarding the pattern of international trade. Quite the opposite is true: he indicates rather precisely the conditions under which a certain pattern of international trade — with is the result of applying the principle of free trade —, could be reverted.

2.4.4.3 *The Assumption of Labor Immobility Between Countries*

Another prominent feature of Ricardo’s international trade theory is the assumption of international immobility of labor. This assumption, unlike to one proclaiming constant labor costs, is indeed necessary for the validity of Ricardo’s proposition regarding the non-appliance of the law of value for the determination of international prices. Ricardo himself is very much aware of it, since he devotes an important part of his exposition to this assumption.⁸⁰

Critics of free trade have repeatedly stated that the assumption of immobility of the factors of production — particularly capital — is not valid for the contemporary world

⁸⁰ Ruffin (2002, p. 734) calculates that from the 973 words Ricardo devoted to explain his insight, he employed 485 to emphasize the importance of factor immobility!

economy anymore. Today, no one would seriously dispute the fact that capital is indeed more mobile than in Ricardo's times. With a simple click on a computer mouse, immense amounts of capital can be transferred at incredible speed from one end of the world to the other. Therefore, the critics argue, any conclusion gained from a theoretic model that uses such an unrealistic assumption cannot be considered valid anymore.

Let us assume for a moment that there is indeed unrestricted mobility of the factors of production in the present world economy. Ricardo explicitly analyzes this possibility in the sixth paragraph of the extensive quote in page 55. In this case, the respective amount of labor would regulate the relative value of the commodities traded. Consequently, commodities would tend to be produced in those locations where the real labor costs are lowest. Labor and capital owners would migrate to these locations in order to enjoy the highest possible standard of living. Ricardo's addition to the classical rule for specialization would not hold anymore, but the case in favor of free international trade would remain essentially untouched.

Now, should Ricardo's assumption of international immobility of the factors of production be considered as an unrealistic supposition in the context of the present world economy? Natural resources — for example fertile land and raw materials — are immobile. Capital is indeed increasingly mobile, but what about labor? Unquestionably, today's labor force has better means of transportation compared to the first decades of the nineteenth century. However, the billions of inhabitants currently living in developing countries cannot migrate to the developed countries to earn higher salaries and enjoy a better standard of living. Strict immigration laws — which have been turned even more restrictive in recent years —, effectively limit the legal — and try to prevent the illegal — immigration from poor to rich nations. Even within the European Union, which grants the citizens of its member states the right to access the labor market of any other member state⁸¹, the labor force show very little disposition to move to another country to seek employment or higher salaries. So today's world economy can be re-

⁸¹ Citizens of the new member states in Central and Eastern Europe are actually banned — although on a temporary basis — to seek employment in countries like Austria and Germany.

garded as an economic system with partial mobility of factors of production: capital is increasingly mobile, but labor not.

The unrelenting validity and importance of Ricardo's propositions for the present becomes evident when applying it to what has been perceived as a growing threat mostly in the developed world in recent years: the emergence of China and India as active players in the world economy. It has been said that these two countries could soon undersell the developed countries in the production of every commodity because of their lower nominal labor costs and huge population numbers.

These widespread fears are unfounded. Inferior nominal labor costs in China and India are in correspondence with the low level of productivity of their labor force. China and India have lower nominal but higher (!) real labor costs compared to the developed countries, which is exactly the situation of England in Ricardo's numerical example. Today, as in Ricardo's time, every nation is interested in trading freely with the rest of the world in order to specialize in certain areas according to its comparative advantage, and to become more productive so that their citizens can consume more commodities and enjoy a higher standard of living.

2.4.5 Reclaiming Ricardo's Authorship

In science the credit goes to the man who convinces the world, not to the man to whom the idea first occurs.

Francis Darwin

Finally, there is one last point that is necessary to deal with. For approximately two hundred years now, there has been an ongoing debate among scholars regarding the correct attribution of authorship and fair distribution of merit for the discovery of the insight called *comparative advantage* or *comparative costs*. While most scholars have followed the tradition of granting Ricardo the exclusive credit for it, some have claimed for a joint authorship and merit-splitting between Ricardo and Torrens, or Ricardo and John Stuart Mill, and a tiny minority have even called for granting the bigger part of the credit

to Torrens, John Stuart Mill or James Mill.⁸² Resuming this controversy, Ruffin (2002, pp. 727-728) critically asserts:

“Historians of the law of comparative advantage have turned a relatively simple and beautiful story into a confused tangle of claims of priority, error, incompleteness, and attribution. It has been said that Robert Torrens (1780-1864) deserves the credit for discovering the law; James Mill (1773-1836) gave the theory to Ricardo; Ricardo had no interest in the law after it appeared; and Ricardo's exposition is deeply incomplete.”

It might be argued, for the sake of appeasement, that this apparently endless debate about authorship can be bypassed without consequence, since what truly matters is the content of the insight, not its legitimate author. I respectfully disagree with this point of view, since it suggests that the question of authorship is unrelated to the content of the insight. On the contrary, the reason behind this prolonged dispute has to be found in the errors and misinterpretations regarding the true meaning of Ricardo's numerical example. Therefore, the desire to establish a correct and neat attribution of authorship is not merely an issue of fairness, nor is it a way to prove one's own academic merits and scientific rigor by contradicting the opinion of prestigious scholars on the subject. It is a necessary and consequent step for further clarifying and advancing the understanding of comparative advantage.

In order to deliver a correct attribution of merit, however, it is necessary to start with a clear definition and delimitation of the subject for which somebody should get credit. Without a clear understanding and precise specification of the achievement, any distribution of merit becomes an arbitrary and non-convincing exercise. So one has to address the following question right from the beginning: What is the achievement surrounding comparative advantage? The previous sections have already brought light into this question from a positive perspective. Nevertheless, in order to draw the line of delimitation even sharper, the same question needs to be addressed now from the

⁸² See Seligman (1911) Chipman (1965) Irwin (1998) and Maneschi (1998) for the Torrens supporters; and J. Hollander (1911), Sraffa (1930) and S. Hollander (1979) for Ricardo's defenders. Viner (1937) is neutral with leanings towards Ricardo, whereas Thweatt (1976) promotes James Mill.

opposite side, establishing what should not be considered an achievement either by Ricardo or by the other candidates of this merit-contest.

As a first step, it is necessary to realize that the real cost comparison between home-production and importing made in the third and fourth paragraph of the extensive quote from the *Principles* is not an innovative contribution of Ricardo to political economy. By establishing this cost comparison, as already been said, he is merely applying the classical rule for specialization, as several authors had already done before him. Therefore, Ricardo should not get credit for that — but Mill and Torrens either.

For the attribution of merit, therefore, the only relevant part is the proposition that that a country would import a certain amount of a commodity although it could produce it internally at lower real costs. Let us start by analyzing the merits of James Mill and John Stuart Mill with respect to this proposition. Both authors wrote their respective references after the *Principles* and never failed to recognize Ricardo's merits on the subject.⁸³ Indeed, Mill father, who considered himself as Ricardo's *genuine disciple*⁸⁴, was very much pleased with his friend's exposition⁸⁵, and would most probably reject in emphatic terms to be named author or co-author of the insights of his dear friend Ricardo. John S. Mill corrected his father's famous error in the *Elements*, but never understood the difference between James Mill's numerical example and Ricardo's. Actually, he never truly grasped the real meaning of the four magic numbers, probably because he learned comparative advantage by his father's textbook.⁸⁶ Therefore, both

⁸³ See J.S Mill (1844, p. 232-233; and also 1909)

⁸⁴ See Ricardo, Vol. IX, p. 391.

⁸⁵ After reading and reviewing the manuscript of the *Principles*, James Mill wrote to Ricardo: "The inquiry concerning foreign trade (...) is like the rest, original, and sound, and excellently demonstrated. That foreign trade augments not the value of a nations property: *that it may be good for a country to import commodities from a country where the production of those same commodities costs more, than it would cost at home*: that a change in manufacturing skill in one country, produces a new distribution of the precious metals, *are new propositions of the highest importance, and which you fully prove*" (Ricardo, Vol. VII, p. 99; emphasis added).

⁸⁶ See J. S. Mill (1909), where he gives credit to Torrens, along with Ricardo, for comparative advantage based on what Torrens wrote in 1808.

Mills have to be considered at least partly responsible for the misinterpretation of Ricardo's insights, and not as its co-authors.⁸⁷

Robert Torrens is the only candidate who could claim to have mentioned the proposition that a country might import a commodity despite having a real cost advantage in its production prior to Ricardo. Actually, he is indeed the only one who has made such a claim, although not during Ricardo's lifetime.⁸⁸ The basis for a certain plausibility of his claim is the following passage of the *Essay on the External Corn Trade* of 1815, written two years before the publication of the *Principles*:

“If England should have acquired such a degree of skill in manufacturing, that, with any given portion of her capital, she could prepare a quantity of cloth, for which the Polish cultivator would give a greater quantity of corn, than she [England] could, with the same portion of capital, raise from her own soil, then, tracts of her territory, though they should be equal, nay, even though they should be superior, to the lands in Poland, will be neglected; and a part of her supply of corn will be imported from that country. For, though the capital employed in cultivating at home, might bring an excess of profit, over the capital employed in cultivating abroad, yet, under the supposition, the capital which should be employed in manufacturing, would obtain a still greater excess of profit; and this greater excess of profit would determine the direction of our industry” (Torrens, Vol. II, pp. 264-265).

This passage can be viewed as an early enunciation of the insight. Torrens was well aware of the counterintuitive nature of this proposition, since he writes at the beginning of the paragraph:

⁸⁷ The principle merit of James Mill consists in having encouraged Ricardo to write the *Principles*. Without his insistence, Ricardo may have not written the book. Ricardo himself recognizes this when he writes in a letter to Mill: “If I am successful in my undertaking it will be to you mainly that my success will be owing, for without your encouragement I do not think that I should have proceeded, and it is to you that I look for assistance of the utmost importance to me — the arranging the different parts, and curtailing what may be superfluous.” However, with respect to theoretical issues, I agree with Sraffa (Vol. I, p. xx) that the influence of Mill on Ricardo is negligible.

⁸⁸ De Vivo, the editor of the *Collected Works of Robert Torrens* (2000) points out that Torrens makes two different priority-claims: one regarding the advantages derived from trade in general based on *The Economists Refuted*, and another regarding comparative advantage in the preface of the 1826 edition of the *External Corn Trade*. De Vivo considers both claims far from convincing and hardly reconcilable with Torrens' own sweeping acknowledgments of Ricardo's priority on the theory of foreign trade. He even refers to a tract published by an anonymous writer in 1814, which contains a much better formulation of comparative advantage than the one we find in Torrens (Torrens, Vol. II, pp. xvii-xix; Vol. VI, p. xxii).

“Let us suppose, that there are, in England, unreclaimed districts, from which corn might be raised at as small an expenditure of labour and capital as from the fertile plains of Poland. [...] [It] seems natural to conclude, that if industry were left to take its most profitable direction, capital would be employed in raising corn at home, rather than in bringing it from Poland at an equal prime cost, and at a much greater expense of carriage. But this conclusion, however obvious and natural it may, at first sight, appear, might, on a closer examination, be found entirely erroneous” (Torrens, Vol. II, pp. 263-264).

Several scholars have repeatedly brought up this passage for establishing the priority — or at least the joint authorship — of Torrens with respect to this insight. Indeed, there can be no dispute about the fact that Torrens had already published his essay well before the *Principles*, since Ruffin (2002, pp. 735-743) convincingly proves that Ricardo must have developed his insight most probably around the first two weeks of October 1816. However, is this undisputed fact a sufficient reason for establishing the priority of Torrens over Ricardo as the legitimate author? It well might be, but only if a critical assessment of Torrens’ passage would prove that it contains a satisfactory formulation of the proposition, equal or superior to Ricardo’s exposition.

When comparing Torrens’ passage with Ricardo’s formulation, there are two crucial elements missing in Torrens. First, he fails to mention the factor costs of Poland in the production of cloth. His statement only alludes to the fact that England should produce cloth and trade it for corn even if it is superior to Poland in corn production. This is sufficient for establishing the comparative advantage of England in cloth, and therefore her interest in trading cloth for polish corn, but it is not enough for this international transaction to actually taking place. Let us add some fictitious numbers — similar to Ricardo’s but based on Torrens’s indications — in a box in order to better visualize the missing element:

	Number of men working for a year required to produce a given quantity of cloth and corn traded	
	cloth	corn
England	100	120
Poland	???	130

Table 4: Torrens’ Missing Element

In the above numerical example, England has a real cost advantage in cloth and corn compared to Poland. Suppose now that Poland also has its comparative advantage in the production of cloth, because it only needs 125 men to produce the amount of cloth traded at home — where is Poland's interest in the exchange? In that case, the inevitable consequence would be that this international exchange would cease. The missing element is not the comparison of cost ratios, as suggested by Robbins (1958, p. 23), but the application of the classical rule for specialization to Poland.

In addition to this shortcoming regarding Ricardo's first proposition, Torrens has nothing to say about Ricardo's second proposition — the non-appliance of the law of value in international transactions —, although it is crucial for the logical prove of the first proposition. Because of these missing elements, Torrens should not get the credit for comparative advantage. He did not bequeath the tools that would have enabled his successors to easily prove the proposition. As Ruffin (2002, p. 731) correctly states: *"There is a difference between hinting at a result and providing the tools to prove a theorem."*

Torrens' supporters have been aware of the shortcomings of their preferred candidate. Their argument in favor of granting him the authorship over Ricardo has always rested not so much on his merits, but on the alleged inconsistencies and omissions in Ricardo's exposition. After having sufficiently proved that these accusations are unfounded, any attribution of authorship to someone other than Ricardo for the two propositions contained in the numerical example of chapter 7 of the *Principles* has to be rejected.

2.5 Sources of Comparative Advantage

According to the classical rule for specialization, a country imports a given amount of a particular commodity from abroad and pays for them with its exports because by doing so, it incurs only in a fraction of the real costs required to produce the same amount of the imported commodity at home. Such gains from international trade are only possible when there are persistent real cost differences between countries in producing the given amounts of commodities traded.

In order to prove the above proposition, let us reassemble Ricardo's famous numerical example, assuming that the amounts of cloth and wine traded between England and Portugal are produced in both countries with the same real labor costs:

	Number of men working for a year required to produce a given quantity of cloth and wine traded	
	cloth	wine
England	100	120
Portugal	100	120

Table 5: Ricardo's Example without Real Cost Differences between Countries

If England were supposed to produce the cloth and Portugal the wine under these terms, such an exchange would not continue for a very long time, since it is in England's but not in Portugal's interest. Portugal would gain the labor of 20 men if she produces the cloth at home, instead of importing it from England.

Now let us assume that Portugal only needs 80 men to produce the amount of wine traded, as Ricardo states in his numerical example:

	Number of men working for a year required to produce a given quantity of cloth and wine traded	
	cloth	wine
England	100	120
Portugal	100	80

Table 6: Ricardo's Example with Real Cost Differences between Countries

Under these terms the exchange of cloth and corn between the two countries would go on, since each country gains the labor of 20 men. What factors may enable Portugal to produce the amount of wine traded with the labor of only 80 men, i.e., 40 men less compared to England?

The existence of persistent real cost differences among countries in producing particular commodities can be explained in terms of natural conditions — such as soil, climate and geographic location — and acquired or artificial advantages, for example

education, production skills, economies of scale and historical development. These factors are usually labeled in the literature as *sources of comparative advantage*.

Ricardo has been repeatedly criticized for missing to specify the sources of comparative advantage. Having already refuted prior accusations towards him, it might be no surprise to discover that this last one can also be proven wrong. Anyone who dedicates some time and effort to read the *Principles* may find the following passage:

“It is quite as important to the happiness of mankind, that our enjoyments should be increased by the better distribution of labour, by each country producing those commodities for which by **its situation, its climate, and its other natural and artificial advantages**, it is adapted, and by their exchanging them for the commodities of other countries, as that they should be augmented by a raise in the rate of profits (Vol. I, p. 132, bold added).”

In the above paragraph Ricardo explicitly mentions two natural sources of comparative advantage, namely the climatic conditions and the geographical location of the country. His reference to *other natural advantages* may imply, for example, the abundance of fertile land and raw materials. No economist would deny that these natural advantages are indeed important sources of comparative advantage, and that they play a determining role in explaining the commodity composition of international trade. More controversial seems to be his general reference to artificial advantages. *Artificial* means of course the product of human endeavor. For example, demand-side differences like taste and cultural traditions in specific countries, economies of scale and history — all of these may be considered as artificial sources of comparative advantage.

Ricardo apparently sees no need for elaborating more specifically what he considers to be artificial advantages. Moreover, he does not even bother to differentiate between natural and artificial sources for the international division of labor. At the first look, his approach seems to be a bit superficial, because it ignores the fact that people are much more willing to accept natural rather than artificial differences. The explanation for his superficial and undifferentiated treatment of natural and artificial sources of comparative advantage has to be found in the following paragraph of the *Wealth of Nations*:

“Whether the advantages which one country has over another, be natural or acquired, is in this respect of no consequence. As long as the one country has those advantages, and the other wants them, it will always be more advantageous for the latter, rather to buy of the former than to make. It is an acquired advantage only, which one artificer has over his neighbour, who exercises another trade; and yet they both found it more advantageous to buy of one another, than to make what does not belong to their particular trades” (*WN*, IV.ii.15, p. 458).

Smith states in the above paragraph that the specific causes of the real cost differences — whether natural or acquired — are irrelevant for grasping the benefits from internal as well as international trade. Contemporary economists have concentrated on a narrow set of factors in order to explain why a country has greater facility in producing certain types of commodities and services than others, such as consumer tastes, a superior technology, economies of scale or the relative abundance of certain factors of production. Mainstream international trade models usually highlight a single factor and exclude all others by assumption. Such a modeling approach seems inappropriate, since comparative advantage is often the result of several factors working simultaneously.

In the *Wealth of Nations* there are actually a very interesting examples of how Smith combines natural and artificial sources of comparative advantage in order to explain the optimal pattern of trade and specialization for the North American colonies and China. His recommendations are based of an accurate analysis of factor supplies and relative prices of the factors of production.

The North American colonies, whose *Declaration of Independence* in 1776 coincided with the publication of the *Wealth of Nations*, were accurately characterized by Smith as having abundant land and relative scarcity of labor and capital. In correspondence with its factor supply, rents would be generally lower and wages and profits higher in the North American colonies than in Europe. Therefore, the comparative advantage of the North American colonies would be in the production and exportation of agricultural products and raw materials rather than in the home-production of refined manufactures.

“Agriculture is the proper business of all new colonies; a business which the cheapness of land renders more advantageous than any other. They abound, therefore, in the rude produce of land, and instead of importing it from other countries, they have generally a large surplus to export. In new colonies, agriculture either draws hands from all other employments, or keeps them from going to any other employment. There are few hands to spare for the necessary, and none for the ornamental manufactures. The greater part of the manufactures of both kinds, they find it cheaper to purchase of other countries than to make for themselves” (*WN*, IV.vii.c.51, p. 609).

Imperial China, on the other hand, had abundant labor densely settled, resulting in low wages and high rents. In opposition to the economic policies of the Chinese gov-

ernment, which favored agriculture more than all other employments⁸⁹, Smith identified China's comparative advantage in the production and exportation of manufactures. Furthermore, he warned that China was approaching economic stagnation, having acquired the amount of wealth that its actual institutions and economic policies permit it to acquire. The expansion of foreign commerce, which China had neglected, could however give a fresh impetus to her economic development.

“The home market of China is, perhaps, in extent, not much inferior to the market of all the different countries of Europe put together. A more extensive foreign trade, however, which to this great home market added the foreign market of all the rest of the world; especially if any considerable part of this trade was carried on in Chinese ships; could scarce fail to increase very much the manufactures of China, and to improve very much the productive powers of its manufacturing industry. By a more extensive navigation, the Chinese would naturally learn the art of using and constructing themselves all the different machines made use of in other countries, as well as the other improvements of art and industry which are practised in all the different parts of the world. Upon their present plan they have little opportunity of improving themselves by the example of any other nation; except that of the Japanese” (*WN*, IV.ix.41, p. 681).

By taking into account the relative abundance of land and labor, as well as the corresponding relative prices of these factors in the North American colonies and China, Smith clearly anticipated the Heckscher-Ohlin approach to international trade theory. However, instead of assuming the artificial factor endowments of a country to be exogenously given, Smith was able to treat the broad pattern of changes in the factor supplies and their relative prices as a part of the process of long-run economic development (Myint, 1977, p. 235).

As a preliminary conclusion, it is possible to affirm that according to the classical theory of international trade there are plenty of sources of comparative advantage. The simultaneous operation of these natural and artificial factors explains the persistent differences in labor productivity that give rise to international division of labor and the observable pattern of trade. Therefore, neither Smith nor Ricardo can be accused of having failed to explain the sources of comparative advantage.

⁸⁹ Consequently, Smith analyzes the economic policies of China in the chapter about Physiocracy. See Smith (*WN*, IV.ix.40, pp. 669ff.).

2.6 The Classical Case against Government Intervention in Trade

2.6.1 Adam Smith and the Laissez-faire Doctrine

Neoclassical supporters of free trade have usually based their case against government intervention in international trade on the laissez-faire doctrine. This explains today's close identification of the case for free trade with laissez-faire economics.⁹⁰ Nowadays, if an economist argues in favor of free international trade, he or she is automatically considered to be also an enthusiastic supporter of laissez-faire capitalism. If the same economist also envisions an active role for the government in specific areas of the economy, out of the conviction that markets are far from being perfectly competitive and need regulation and supervision for their proper functioning, he/she would rather be seen as an inconsequent and contradictory scholar. If an economist does not believe in the proposition of self-regulating markets, he/she has to support — at least in principle — government intervention in international trade as well.

At the first look, this close association of free trade with the laissez-faire doctrine appears to be indeed compelling and historically accurate. After all, the Physiocrats, who coined and popularized the maxim *laissez faire et laissez passer* — implying freedom to produce and freedom to trade —, were also known for their explicit support of free international trade. However, as already pointed out in section 2.1, the Physiocrats' support for free trade was based on a specific theoretical analysis, which is in many respects contrary to the insights of classical political economy. It is a historically proven fact that the Physiocrats' support for free trade was merely circumstantial and temporary.

Those who have presented the free-trade case as a logical and necessary extension of the general case for laissez-faire in the economy have often mischaracterized Adam Smith as an eloquent spokesperson of the laissez-faire doctrine. According to this interpretation, as Rosenberg (1974, p. 1177) critically points out, the *Wealth of Nations* has

⁹⁰ A good example for the identification of the free trade case with the laissez-faire doctrine can be found in Krugman (1987, p. 134): “*The view that free trade is the best of all possible policies is part of the general case for laissez-faire in a market economy, and rests on the proposition that markets are efficient. If increasing returns and imperfect competition are necessary parts of the explanation of international trade, however, we are living in a second-best world where government intervention can in principle improve on markets outcome.*”

been regarded as the *locus classicus* of the laissez-faire ideology, a book that established “(...) a powerful economic justification for the untrammelled pursuit of individual self-interest” (Hirschman, 1977, p. 100).⁹¹

The erroneous notion that Smith was a supporter of the laissez-faire maxim seems to root partly in the fact that the bulk of his critique of the two earlier theoretic systems of political economy — concentrated in Book IV of the *Wealth of Nations* — is directed towards mercantilism.⁹² However, to infer from this undisputed fact that he was sympathetic towards the economic doctrine of the Physiocrats is flatly wrong, since it ignores the explanation given by Smith himself about the genuine reason that impelled him to concentrate his critique on mercantilism rather than physiocracy:

“That system which represents the produce of land as the sole source of the revenue and wealth of every country, has, so far as I know, never been adopted by any nation, and it at present exists only in the speculations of a few men of great learning and ingenuity in France. It would not, surely, be worth while to examine at great length the errors of a system which never has done, and probably never will do any harm in any part of the world” (*WN*, IV.ix.2, p. 663).

Smith treats physiocracy with relative benevolence — compared to his relentless hostility towards the economic doctrines of mercantilism — not because he agrees with the main theoretical propositions and economic theories advanced by this school of economic thought⁹³, but because it was less relevant in the political arena. At the time when Smith wrote the *Wealth of Nations*, physiocracy was merely a local phenomenon of scarce political relevance outside France. In the early years of the nineteenth century, however, it would have been virtually impossible for any British economist to regard physiocracy as an eccentric, ephemeral and peculiarly French body of economic thought. These were

⁹¹ Pack (1991) gives credit to Jacob Viner for refuting the view that Smith was in favor of laissez-faire. Indeed, Viner affirms in his paper *Adam Smith and Laissez Faire* that Smith “(...) was not a doctrinaire advocate of laissez-faire” (1927, p. 231). However, Viner also affirms in his well-known book *Studies in the Theory of International Trade* that “(...) the antecedents of Smith’s laissez-faire and free-trade views are probably rightly to be sought mainly in the philosophic literature, and perhaps also the writings of the Physiocrats, rather than in the earlier English economic literature” (1937, p. 91). Such contradictory statements clearly contribute to perpetuate and propagate the erroneous but persistent view of Smith being a laissez-faire advocate. See also Viner (1960).

⁹² Eight of the nine chapters of Book IV of the *Wealth of Nations* are dedicated to criticise the Mercantilists, whereas the critique of the Physiocrats is concentrated in the final chapter.

⁹³ As suggested, for example, by Pack (1991, p. 41).

the years of the great debates among British scholars and politicians over the validity of the physiocratic economic principles (Meek, 1951, p. 26). It was not possible for Smith, though, to anticipate this course of event a quarter of a century earlier.

Any objective and thoughtful comparison of the physiocratic doctrine with classical political economy would lead to the conclusion that they are indeed two opposing and mutually incompatible systems of economic thought. Nevertheless, physiocracy has often been presented in the economic literature as a direct precursor and guiding inspiration for Smith's economic thinking, whereas the role of the opponent has been assigned exclusively to mercantilism.⁹⁴ It would certainly be more accurate to consider both mercantilism and physiocracy as antecedents but also as opponents of classical political economy.

A mayor topic where classical political economists strongly disagree with the physiocratic doctrine is precisely the one related to the general maxim of laissez faire in the economy. No one is perhaps better suited to demonstrate this than Smith himself. In order to prove this affirmation, I am going to analyze in some detail Smith's thoughts related to the main proposition of the laissez-faire doctrine: the proclaimed harmony of private self-interests with the general interests of the society, and the consequent belief in the perfect functioning of an unregulated capitalistic economic system.

The reception of Smith in present-day economic literature is usually limited to a few quotations from the *Wealth of Nations*⁹⁵, in which he apparently proclaims the general harmony of private and public interests:

It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages (*WN*, I.ii.2, pp. 26-27).

Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society, which he has in view. But the study of his own advantage naturally, or rather necessarily leads him to prefer that employment which is most advantageous to the society (*WN*, IV.ii.4, p. 454).

⁹⁴ For a prominent example of this view, see Viner (1937, p. 91).

⁹⁵ See Gramm (1980).

As every individual, therefore, endeavors as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labor to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which has no part of his intention. Nor is it always the worse of the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good by those who affected to trade for the public good (*WN*, IV.ii.9, p. 456).

The natural effort of every individual to better his own condition, when suffered to exert itself with freedom and security, is so powerful a principle, that it is alone, and without any assistance, not only capable of carrying on the society to wealth and prosperity, but of surmounting a hundred impertinent obstructions with which the folly of human laws too often incumbers its operations; though the effect of these obstructions is always more or less either to encroach upon its freedom, or to diminish its security (*WN*, IV.v.b.43, p. 540).

The selective and out-of-context quotation of the above passages of the *Wealth of Nations* has necessarily led to the misguided impression that Smith was an eloquent advocate of laissez faire capitalism. Therefore, in order to interpret the above statements accurately it is necessary to put them first in the appropriate historic context.

Before the publication of the *Wealth of Nations*, mercantilist thinkers had established the proposition that the self-interest of private agents in the economic realm, in particular the profit motive of merchants, were not capable of bringing any positive outcome for the society at all. Private and public interests were presented as mutually incompatible. Both of the reasons mercantilist writers set down for regulating trade — to promote a favorable balance of trade and to secure greater manufacturing production — were derivative of a more general view of trade where an inherent disharmony between private and public interests led to a misallocation of economic resources that could only be remedied by government intervention. Therefore, the mercantilists considered government officials in general better suited than private producers to determine the proper channels for economic activity. As far as objections were raised against public regulations of the self-interested activities of merchants, they usually rested on concerns about the incompetence of the regulators, or the unavailability of unbiased advisers, or the inability of the government to cope with the strength of the profit motive (Viner, 1937, p. 95ff.).

In this historical context, the proposition advanced in the *Wealth of Nations* that the self-interest of private economic agents could perform a beneficial service to society was neither widespread nor particular popular. Therefore, Smith needed to convince the reader first that self-interest is indeed a common and powerful force behind the most ordinary economic activities of daily life, like selling bread or meat.

When one read these passages of the *Wealth of Nations* out of context with the rest of the text and in isolation from Smith's other writings, though, it appears the he has adopted the ideas attributed to a contemporary, Bernard Mandeville, who links in his famous "*The Fable of the Bees*" all human motivation with selfish passions, and considers selfishness as a natural and beneficial force in the economic realm.⁹⁶ Based on this interpretation, Smith is credited for having solved the dichotomy between natural selfish passions and public interests.

Such an interpretation, however, does not accurately reflect the content and spirit of Smith's thinking on the subject. The most accurate scholars of Smith have arrived to this conclusion. It was Mandeville — not Smith —, who concluded that the private vices of selfishness and greed could lead to public benefits. Smith did not agree with Mandeville's propositions that human beings are solely motivated by selfish passions, and that selfishness could perform a beneficial role in the society.⁹⁷

Self-interest and not *selfishness* is the foundation of Smith's economic analysis; it is the important driving force in economic activity, ethically positive and of social benefit under definite conditions.⁹⁸ Thus, the butcher and the baker are not necessarily selfish but simply indifferent to the interests of others, at least in economic affairs, except when those interests affect their business concerns (Werhane, 1991, p. 5).

In parallel to the recognition that self-interest has a dominant role in the creation of wealth, Smith develops a more elaborated view of this concept. It is important to recognize that self-interest means to him not only rational pecuniary interest, but also self-love in all its possible manifestations. In addition to the traditional meaning of relentless

⁹⁶ See Mandeville (1988).

⁹⁷ For Smith's comments on Mandeville, see (*TMS*, VII.ii.4.6-14, pp. 308-314).

⁹⁸ See Recktenwald (1978, p. 58).

pursuit of material gain — the “*constant, uniform and uninterrupted effort of every man to better his condition*” (WN, II.iii.31, p. 343) —, Smith also considers the desire for ease and enjoyment, envy, malice and resentment as manifestations of self-interest (Viner, 1927, p. 212). The desire for ease and inactivity, therefore, acts as a major counterbalance to the pursuit of wealth, because “*it is the interest of every man to live as much at his ease as he can*” (WN, V.i.f.7, p. 760).

In addition to his broader conception of self-interest, Smith also distinguishes between what a person is interested in and what is to his/her interest. It is what an individual regards as its personal interest, even though mistakenly, that guides his actions. Therefore, every possible motive to action is included under self-interest except a deliberate intention to promote the welfare of others than one’s self (Viner, 1927, p. 213).

Based on the recognition of the often-conflicting forces that impel the economic agent to action, Smith distinguishes between the desire for wealth and its attainment in order to assess the effects of wealth on human actions. Whereby he regards the desire for material prosperity as a force, which prods and lures the human being to put forth the greatest efforts, he almost regards the resulting attainment and possession of wealth as universally corrupting. For, once such wealth has been acquired, the individual naturally gives vent to his desire for ease (Rosenberg, 1960, p. 557f.).

It may be surprising for those who have considered Smith as an apostle of greed and profit maximization, to read the following statement about the effect of high profits upon the business class:

“The high rate of profit seems every where to destroy that parsimony which in other circumstances is natural to the character of the merchant. When profits are high, that sober virtue seems to be superfluous, and expensive luxury to suit better the affluence of his situation” (WN, IV.vii.c.61, p. 612).

Therefore, far from regarding the highest possible level of profits as the major source and incentive for accelerated capital accumulation, Smith is preoccupied with the negative effects of great wealth on the motivation and behavior of private economic agents. The individual applies himself with maximum industry and efficiency when the reward

for effort is neither too low (slaves, apprentices) nor too great (monopolists, large land-owners).⁹⁹

Moreover, Smith is not only concerned with the appropriate level of intensity of the human effort, but also with the direction into which this effort is channeled. He regards human beings as naturally deceitful and unscrupulous in their pursuit of wealth, perfectly capable and willing to employ predatory practices so long as such practices are available to them (Rosenberg, 1960, p. 560).¹⁰⁰ Far from assuming an automatic compatibility between selfish private interests and the interests of the society as a whole — the existence of perfect harmony in the economic order —, Smith is actually foremost pre-occupied with the elaboration of a detailed institutional framework which will best harmonize the individual's legitimate pursuit of self-interest with the broader interests of society. His main goal is to construct an institutional framework that would place individuals under the proper amount of psychic tension to overcome their desire for ease and also that would cut off all avenues along which wealth may be pursued without contributing to the welfare of society. He wants to compel private economic agents to use only the good instruments. Such an ambitious goal requires in practice a careful balancing of incentive, of provision of opportunities to enlarge one's income, against the need to minimize the opportunities for abuse, i.e., possibilities for increasing one's income in an antisocial fashion.

A central cornerstone of Smith's institutional framework is of course the competitive market. This competitive order envisioned by Smith can be defined, negatively, by the absence of all special privilege and sources of market influence and, positively, by the all-pervasive and uninhibited pressures of the market place (Rosenberg, 1960, p. 560).

⁹⁹ Smith writes about slaves: *"The experience of all ages and nations, I believe, demonstrates that the work done by slaves, though it appears to cost only their maintenance, is in the end the dearest of any. A person who can acquire no property, can have no other interest but to eat as much, and to labour as little as possible. Whatever work he does beyond what is sufficient to purchase his own maintenance, can be squeezed out of him by violence only, and not by any interest of his own"* (WN, III.ii.9, pp. 387-388). On the other hand, as already cited: *"A man of a large revenue, whatever may be his profession, thinks he ought to live like other men of large revenues; and to spend a great part of his time in festivity, in vanity, and in dissipation"* (WN, V.i.g.42, pp. 813-814).

¹⁰⁰ In Smith's own words: *"Such, it seems, is the natural insolence of man, that he almost always disdains to use the good instrument, except when he cannot or dare not use the bad one"* (WN, V.i.g.19, p. 799).

However, Smith regards the establishment and proper functioning of a competitive market as a necessary but insufficient condition to secure the linkage between unhampered pursuit of self-interest and social well-being. On the contrary, he is obsessed with the urge to go beyond the ordinary market-structure definition of competition and to define ways in which appropriate institutions may contribute to the productivity of the human agent as a factor of production.

The secondary literature on Smith, although, has put too much emphasis on the proposition that the establishment of a free market would promote economic efficiency. This emphasis on the allocative efficiency of the free market has led to an oversimplified interpretation of Smith's views, which can be summarized with the following syllogistic reformulation. First, the wealth of a nation is the aggregate wealth of its citizens; second, every individual desires to increase his wealth as much as possible; third, every individual can judge better than a distant statesmen what use of his/her labor and capital is likely to produce the highest increase of his/her personal wealth; forth, the means employed by individuals to increase their wealth are always in correspondence with the interests of society; therefore, the wealth of a nation will increase most rapidly if every individual is left free to conduct his own affairs without state intervention.

The problem with this syllogistic statement is that it short-circuits Smith's profound and complex thinking on these subjects. By jumping directly from the conception of the economic agent as a rational creature to the policy recommendation of laissez-faire, most of the real substance of Smith's insights are oversimplified or left out completely (Rosenberg, 1960, p. 557). Because of the increasingly formal nature of economics as an academic discipline, the institutional content and preoccupations of Smith have suffered prolonged neglect. Consequently, this moral philosopher and distinguished representative of the *Scottish Enlightenment* has been misrepresented as a doctrinaire advocate of laissez-faire.

A quick look at Smith's analysis about profits and wages is sufficient for refuting the notion of him as a fervent supporter of laissez-faire capitalism. One might expect from any enthusiastic supporter of laissez-faire capitalism that he or she would consider high profits as desirable and high wages as undesirable. Yet in Smith's case, quite the opposite is true. He treats high wages as being unqualifiedly a good thing, and high profits as being unqualifiedly a bad thing (Rosenberg, 1974, p. 1178).

After dividing the annual produce of the society into three categories — the rents of the landowner, the wages of the workers and the profits of the capitalists —, Smith concludes that the interest of the capitalists — to achieve the highest possible rate of profit — does not coincide with those of society:

“The rate of profit does not, like rent and wages, rise with the prosperity, and fall with the declension, of the society. On the contrary, it is naturally low in rich, and high in poor countries, and it is always highest in the countries which are going fastest to ruin. The interest of this third order [i.e., capitalists], therefore, has not the same connexion with the general interest of the society as that of the other two [i.e., landowners and workers]” (*WN*, I.xi.p.10, p. 266).

As a result, capitalists as a class are simply not to be trusted:

“The interest of the dealers, however, in any particular branch of trade or manufactures, is always in some respects different from, and even opposite to, that of the publick. To widen the market and to narrow the competition, is always the interest of the dealers. To widen the market may frequently be agreeable enough to the interest of the publick; but to narrow the competition must always be against it, and can serve only to enable the dealers, by raising their profits above what they naturally would be, to levy, for their own benefit, an absurd tax upon the rest of their fellow-citizens. The proposal of any new law or regulation of commerce which comes from this order, ought always to be listened to with great precaution, and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention. It comes from an order of men, whose interest is never exactly the same with that of the public, who have generally an interest to deceive and even to oppress the public and who accordingly have, upon many occasions, both deceived and oppressed it” (*WN*, I.xi.p.10, p. 267).

Why does this allegedly advocator for laissez-faire capitalism treat high profits with such unrelieved hostility? The answer to this question revolves primarily around the belief that high profits are the necessary result of a low level of competition between individual capitalists in a particular branch of the economy. In addition to this, as already been said, Smith believes that easily earned high profits destroy the effectiveness with which the capitalist carries out his social role.

When Smith turns from the examination of the economic behavior of the capitalist to that of the laborer, his attitude shifts from that of compulsive and cantankerous criticism and suspicion to one of compassion and understanding. In sharp contrast with his negative appreciation of high profits, he considers high wages as universally desirable:

“Is this improvement in the circumstances of the lower ranks of the people to be regarded as an advantage or as an inconveniency to the society? The answer seems at first sight abundantly plain. Servants, labourers and workmen of different kinds,

make up the far greater part of every great political society. But what improves the circumstances of the greater part can never be regarded as an inconveniency to the whole. No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, cloath and lodge the whole body of the people, should have such a share of the produce of their own labour as to be themselves tolerably well fed, cloathed and lodged” (*WN*, I.viii.36, p. 96).

This favorable position towards higher salaries and labor income was in sharp contrast with the economic doctrines of the majority of his predecessors and contemporaries, who were mostly concerned with the undesirable social consequences of high wages and rising income of the working class (Marshall M. G., 1998; 2000). It was part of the conventional wisdom prior to the *Wealth of Nations* that high wages would reduce the labor effort of the working class.¹⁰¹ Compared to these prior notions, Smith’s views on high wages were both novel and enlightened. Not only did he believe that high wages were intrinsically desirable because they improved the standard of living of the majority of the population, but he also believed — and here he clashes head-on with the prevailing view — that higher wages called forth greater effort and not less:

“The liberal reward of labour (...) increases the industry of the common people. The wages of labour are the encouragement of industry, which, like every other human quality, improves in proportion to the encouragement it receives. A plentiful subsistence increases the bodily strength of the labourer, and the comfortable hope of bettering his condition, and of ending his days perhaps in ease and plenty, animates him to exert that strength to the utmost. Where wages are high, accordingly, we shall always find the workmen more active, diligent, and expeditious, than where they are low” (*WN*, I.viii.44, p. 99).

Although Smith concedes that higher wages are likely to induce some workers to reduce the number of hours worked, he believes that they would constitute only a minority of the labor force. Indeed, Smith appears to be genuinely concerned over the opposite possibility, that a system of incentive wages will cause many workers to suffer the deleterious effects of overwork. In this respect he might be regarded as one of the first economists for whom this was a major concern.¹⁰²

¹⁰¹ For the transition from the old view to Smith’s position, see Coats (1958).

¹⁰² Smith states: “*Some workmen, indeed, when they can earn in four days what will maintain them through the week, will be idle the other three. This, however, is by no means the case with the greater part. Workmen, on the contrary, when they are liberally paid by the piece, are very apt to over-work themselves, and to ruin their*

Smith's analysis of profits and wages is also very interesting with regard to a proposition often heard in the present context of accelerated economic globalization: that high wages diminish national competitiveness with respect to foreign competitors. Smith unmasks the hypocritical nature of this proposition, closing the chapter on profits with the following statement:

“Our merchants and master-manufacturers complain much of the bad effects of high wages in raising the price and thereby lessening the sale of their goods both at home and abroad. They say nothing concerning the bad effects of high profits. They are silent with regard to the pernicious effects of their own gains. They complain only of those of other people (*WN*, I.ix.24, p. 115).”¹⁰³

After reading all these less-quoted passages of the *Wealth of Nations* someone who has been taught to regard Smith as a spokesperson for unfettered laissez-faire capitalism might start wondering what sort of peculiar capitalist apologetic he is. One would expect to read praises for high wages and critique for high profits in Marx's *Das Kapital*, but not in the *Wealth of Nations*. The obviously flawed notion of Smith as an advocate of laissez-faire capitalism can only be the result of a very selective and biased reading of the *Wealth of Nations*.

Smith may have coincided with the Physiocrats in the philosophical proposition that self-interested actions of individuals can perform a beneficial service for the society. The crucial difference resides in the respective level of compatibility attributed. The Physiocrats believe that there is complete harmony — the highest level of compatibility conceivable — between private actions and the public interest. Smith holds to a more

health and constitution in a few years. A carpenter in London, and in some other places, is not supposed to last in his utmost vigour above eight years. Something of the same kind happens, in many other trades, in which the workmen are paid by the piece, as they generally are in manufactures, and even in country labour, whenever wages are higher than ordinary” (*WN*, I.viii.44, pp. 99-100). Smith also pioneered the analysis on the deleterious consequences of the division of labor upon the work force. See Smith (*WN*, V.i.f.50, pp. 781-782), Rosenberg (1965), and West (1964, 1969).

¹⁰³ He actually believes so strong about this issue, that he repeats the above statement, substantially unchanged, in another part of the *Wealth of Nations*: “Our merchants frequently complain of the high wages of British labour as the cause of their manufactures being undersold in foreign markets; but they are silent about the high profits of stock. They complain of the extravagant gain of other people; but they say nothing of their own. The high profits of British stock, however, may contribute towards raising the price of British manufactures in many cases as much, and in some perhaps more, than the high wages of British labour” (*WN*, IV.vii.c.29, p. 599).

nuanced position that competition within the framework of natural liberty ensures a broad but imperfect harmony of the private interests of individuals and the general interest of the society, with the government creating an institutional framework that would regulate the economic activities of the private economic agents where a conflict of interest may subsist. Under this conception, government interference with the free operation of self-interest is not only allowed but also necessary in order to secure the economic progress of the country.

Acknowledging the existence of specific areas and multiple circumstances in which the government has to play an active role in guaranteeing the proper functioning of the economic system, does not mean to give the government a *carte blanche* for interfering in every economic activity, for example in the international exchange of commodities and services. Any specific government intervention has to be evaluated in terms of the proposed objectives and probable effects. The next section deals with the main arguments of classical political economy against government intervention in international trade.

2.6.2 Smith's Arguments Against Trade Intervention

The proclaimed objectives of protectionism have always been to boost national production and to create new jobs. Agreeing with the mercantilists that a tariff would usually expand the output and level of employment in the protected sector, Smith poses a more penetrating consideration rarely raised by others: he takes into account the economy-wide impact of these trade interventions, instead of looking merely at the increase in real output and employment in the targeted sector.¹⁰⁴

The amount of capital available in an economy is fixed at any given point in time. A protectionist measure cannot immediately increase the total amount of capital; it can

¹⁰⁴ Smith states: “That this monopoly of the home-market frequently gives great encouragement to that particular species of industry which enjoys it, and frequently turns toward that employment a greater share of both the labor and stock of the society than would otherwise have gone to it, cannot be doubted. But whether it tends either to increase that general industry of the society, or to give it the most advantageous direction, is not, perhaps, altogether so evident” (WN, IV.ii.2, p. 453).

merely divert a part of it to the protected sector.¹⁰⁵ This has a direct implication for evaluating policies that aimed to protect or promote certain industries or sectors. It is no longer sufficient to declare that an import tariff is beneficial for the economy simply because it increases the output and employment in a single sector; it is also necessary to take into consideration the probable negative effects on real output and employment in those sectors from which capital is artificially withdrawn.

Smith believes that the increase in the output of the protected sector would be obtained at the cost of decreasing the level of output and employment in other branches of the economy, first and foremost the export sectors that produces the commodities which are given in exchange for the imports. As a result, the most probable effect of any protectionist measure would be the exact opposite of the proposed objectives:

“It is thus that every system which endeavours, either, by extraordinary encouragements, to draw towards a particular species of industry a greater share of the capital of the society than what would naturally go to it; or, by extraordinary restraints, to force from a particular species of industry some share of the capital which would otherwise be employed in it; is in reality subversive of the great purpose which it means to promote. It retards, instead of accelerating, the progress of the society towards real wealth and greatness; and diminishes, instead of increasing, the real value of the annual produce of its land and labour” (*WN*, IV.ix.50; p. 687).

By asserting which commodities should be produced at home, and which ones should be imported, government officials usurp an economic function usually carried out by private economic agents. The self-interests of these private economic agents, though, are in this particular area essentially compatible with the general interests of the society. Their own economic interest would require them to make investment decisions based on the classical rule of specialization, which is very favorable to the general goal of increasing the wealth of the nation to the utmost. Smith states:

“All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord. Every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest his own way, and to bring both his industry and capital into competition with those of any other man, or order of men. The

¹⁰⁵ In Smith’s own words: “No regulation of commerce can increase the quantity of industry in any society beyond what its capital can maintain. It can only divert a part of it into a direction into which it might not otherwise have gone; and it is by no means certain that this artificial direction is likely to be more advantageous to the society than that into which it would have gone of its own accord” (*WN*, IV.ii.3, p. 453).

sovereign is completely discharged from a duty, in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient; the duty of superintending the industry of private people, and of directing it towards the employments most suitable to the interest of the society” (*WN*, IV.ix.51; p. 687).

Having an accurate understanding and practical insight about the nature and functioning of the aristocratic English government of his time, it was impossible for Smith to believe in the myth that trade interventions were made on behalf of the general interest of the society. The real motive behind the recurrent and ubiquitous trade interventions was invariably to satisfy some private — one may say selfish — interests of powerful groups, mostly aristocratic landowners and rich merchants. They were the sponsors and only beneficiaries of the protectionist trade policies of the time. It is safe to assume that the English aristocratic politicians were not primarily concerned with the economic interests of the commoners. The English consumers, and in particular the poor, had to confront the economic hardships directly occasioned by these trade interventions. Smith criticizes this neglectfulness of the consumers’ legitimate interests:

“Consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer. (...) But in the mercantile system, the interest of the consumer is almost constantly sacrificed to that of the producer; and it seems to consider production, and not consumption, as the ultimate end and object of all industry and commerce. In the restraints upon the importation of all foreign commodities which can come into competition with those of our own growth, or manufacture, the interest of the home-consumer is evidently sacrificed to that of the producer. It is altogether for the benefit of the latter, that the former is obliged to pay that enhancement of price which this monopoly almost always occasions” (*WN*, IV.viii.49-50, p. 660).

The *Wealth of Nations* was foremost a political tract for the times. It was conceived by Smith as a specific attack on certain types of government policies which he was convinced, on both theoretical and empirical grounds, operated against national prosperity, namely, bounties, duties and prohibitions in foreign trade; apprenticeship and settlement laws; legal monopolies; laws of succession hindering free trade in land. Smith’s primary objective was to secure the termination of these government policies.

The unifying theme in the *Wealth of Nations* is the critique of human institutions based on whether or not they are so contrived as to frustrate man’s baser impulses and antisocial proclivities and to make possible the pursuit of self-interest only in a socially

beneficial fashion. Government intervention had to be restrained, especially when it was possible to demonstrate that a particular government intervention, for example in international trade, was usually exercised on behalf of those vested interests which perverted the natural course of opulence. The basis of Smith's harsh critique of the mercantile system lay in the fact that it enables merchants to better their condition in a manner that does not contribute to the nation's economic wealth. Because of the dispensation of monopoly grants, of the arbitrary bestowal of "extraordinary privileges" and "extraordinary restraints" upon different sectors of industry by the government, the individual merchant was able to enrich himself without at the same time enriching the nation.

As a preliminary conclusion, it can be affirmed at this point that the classical case for free trade does not build nor depend on the general laissez-faire doctrine. Smith undermines what is ordinarily regarded as the main proposition of the laissez-faire doctrine — the proclaimed harmony of private self-interests with the general interests of the society, and the consequent belief in the perfect functioning of an unregulated capitalistic economic system — by demonstrating that the natural order, when left to take its own course, in many respects works against, instead of for, the general interests of the society.

The classical case for free trade is rather based on an accurate analysis regarding the benefits and mutual gains from free international trade, as well as the selfish motives behind most trade interventions. The main benefit of foreign commerce is that it increases the amount of commodities available in a country to the utmost. For an international exchange to be mutually beneficial, each country has to observe the classical rule of specialization, which states that it pays for a country to import commodities whenever the real costs of the exported commodities are lower than the estimated real costs of home production.

That being said, it is important to realize that the contemporary case for free trade is fundamentally different from the one presented in this chapter. The mainstream international trade theory currently behind the modern free-trade case is that of the neoclassical school of economic thought, which is essentially incompatible with classical political economy. The next chapter is dedicated to work out the main differences between the classical and neoclassical international trade theories.

3 The Neoclassical Case for Free Trade

3.1 Classical vs. Neoclassical Framework of International Trade

Neoclassical economists have usually coincided with classical political economists on the proposition that free trade is the most suitable commercial policy for achieving long-term economic growth. This consensus between classical and neoclassical economists on international trade policy may explain why many contemporary economists consider *the* case for free trade as if it were based on a unified and consistent economic theory. If one takes a deeper look into the economic theory deployed by each school of economic thought in order to sustain the recommendation in favor of free trade, however, one may discover that these recommendations are based on different and mutually exclusive theoretical frameworks.

Generally speaking, the main point of disruption between the classical and the neoclassical school of economic thought consists in their competing theories of value and distribution. The theory of value and distribution of the neoclassical school of economic thought — also known as the general economic equilibrium paradigm — states, for example, that the relative or exchange value of a commodity is determined by its utility, whereas the main representatives of the classical school of economic thought — Smith, Ricardo and Marx — explicitly rejected the idea that the utility — or *value in use* — of a commodity determines its relative value.

The general economic equilibrium paradigm is also the main theoretic framework deployed by neoclassical economists for ruling out all sorts of government interventions in the economy, including the ones in international trade. This neoclassical reliance on the general economic equilibrium paradigm for rejecting government interventions in international trade has had far-reaching implications for the theoretical case in favor of free trade. In order to better understand these implications, it is necessary to explain with greater detail some other points of disruption between the classical and the neoclassical framework of international trade.

To start with, it is important to realize that the classical case for free trade does not build upon nor rely on the general economic equilibrium paradigm for ruling out government intervention in international trade. As already been stated, Smith's plea against

government intervention in international trade is based on the argument that free trade is by and large compatible with the general purpose of increasing the wealth of the society to the utmost. Instead of proclaiming the intrinsic equilibrium of the unfettered market, Smith asserts an important but limited compatibility between private and social interests with regard to the decision on which commodities and services should be produced within national borders or otherwise imported.¹⁰⁶

The incorporation of the general economic equilibrium paradigm into mainstream international trade theory is a consequence of the ascension to dominance of the theory of value and distribution promoted by the neoclassical school of economic thought. As a result, there has been a significant but rather subtle shift of focus in economic analysis with respect to the classical school of economic thought. According to classical political economy the most important decisions that individuals have to confront in the economic sphere are the choice of occupation and the level of specialization within the chosen occupation. These kinds of decisions are also known as the *problem of economic organization*, which essentially consist in finding the efficient level and pattern of the division of labor in order to reduce scarcity by trading off productivity gains against transaction costs. With the theoretical works of Carl Menger (2006)¹⁰⁷, Leon Walras (1977)¹⁰⁸ and Alfred Marshall (1920) oriented towards the demonstration of the existence of a general economic equilibrium, though, the focus of economic analysis has been gradually shifted from the function of the price system in coordinating individual specialization to the function of the price system in allocating resources. The essence of the *problem of resource allocation* is to find the efficient quantities of different commodities, and the efficient quantities of factors dedicated to produce those commodities, for a given degree of scarcity (or a given transformation function) and a given pattern and level of the division of labor (Yang, 2001, p. 10).

Marshall in particular has been credited for successfully formalizing the problem of resource allocation in his *Principles of Economics* (1920). To accomplish the mathematical

¹⁰⁶ See Smith (*WN*, IV.ii, pp. 452ff.).

¹⁰⁷ First published in 1871.

¹⁰⁸ First published in 1874.

formalization, however, he had to assume a strict dichotomy between consumers' decisions and firms' decisions in order to avoid inframarginal analysis of corner solutions (Yang, 2001, pp. 8-9). Assuming a strict dichotomy between consumers and firms means that consumers cannot choose the self-provision of any of the commodities that they demand, nor the level of specialization in producing them, but must buy all commodities from firms. Furthermore, it implies that consumers cannot survive in the absence of firms and the corresponding market system that link them to these firms. In Marshall's framework, therefore, the existence of firms and markets are exogenously given.

Despite the arbitrary nature of the above assumption, Marshall's dichotomy has been very popular among later economists, since it is an essential pillar for the formulation of the aggregated supply and demand functions, which are at the core of modern general economic equilibrium theory. On the intersection point of the aggregate supply functions with the aggregate demand function it is said that the economy is in a state of equilibrium.

For the required symmetry of the two opposite forces supply and demand, neoclassical economists had to define a law of supply in such a way that can be coordinated with the corresponding law of demand. For accomplishing this, they defined a supply curve based upon the laws of increasing and diminishing returns, whose origin can be traced back to classical political economy.¹⁰⁹ In order to obtain the desired result, though, they had to introduce certain modifications in the original form of these laws of returns. Relatively little modification was necessary with regard to the law of diminishing returns, which merely required to be generalized from the particular case of land to every case where there is a constant quantity of a specific factor of production available. The law of increasing returns, though, had to be subjected to a much more radical transformation: the part played in it by the division of labor was greatly restricted, because the division

¹⁰⁹ In addition to that, Sraffa (1926, p. 537) points out that these laws of returns have been removed from the positions they used to occupy according to the traditional partition of political economy — decreasing returns under the heading “distribution” and increasing returns under “production” —, and have been transferred to the chapter of “exchange value” in neoclassical economics.

of labor within a firm, which is rendered possible by an increase in the dimensions of an individual firm, was entirely abandoned, as it was regarded as incompatible with the assumption of perfect competition.¹¹⁰ Consequently, the core of classical economics concerning the crucial role of the division of labor in increasing the general level of productivity has been mostly relegated to footnotes in mainstream neoclassical economic theory. On the other hand, the importance of external economies was more and more emphasized — that is, of the advantage derived by individual producers from the growth, not of their own individual undertakings, but of the aggregate industry (Sraffa, 1926, pp. 537-538).

In classical political economy, by contrast, the law of increasing returns occupied a less prominent role in explaining increases in productivity. It was regarded merely as an important effect of the division of labor, and thus rather as a result of general economic progress than of an increase in the scale of production. Furthermore, the functional connection between cost and quantity produced — for which the neoclassical economists created the concept of economies of scale — was not given a prominent place in classical political economy.¹¹¹

The marginalization of the concept of division of labor within the neoclassical economic theory is also due to the fact that firms — and not individuals — are the basic and only productive units in the neoclassical framework, and a firm's productivity is primarily explained by its size. This can be easily demonstrated by analyzing the neoclassical theory of production. In neoclassical textbooks a firm's production is often expressed formally with the help of so-called production functions, which describe the relationship between inputs and outputs of a firm. The most important feature of this relationship is the connection between the scale of a firm's operations and its productivity, whereas the scale of operation is defined by either the output size or the input size. In other words, the only variables involved in neoclassical production functions are output levels of commodities and input levels of production factors (capital and labor). Consequently, a firm's productivity is determined solely by its size. Other contributing

¹¹⁰ See Buchanan & Yoon (1999).

¹¹¹ See Sraffa (1926, p. 537) and Yang (2001, p. 43).

factors to a firm's productivity like the level of specialization and division of labor of the individuals within the firm, or the level of specialization of this group of individuals with respect to the economic system in which the firm operates, are literally left out of the equation. Furthermore, variables that relate to the degree of interpersonal dependence, individuals' levels of specialization, the level of division of labor in the firm or in society, and the related size of the market in determining the general level of productivity in the society, are also absent in these neoclassical production functions (Yang, 2001, p. 38).

It is important to be aware of these crucial differences mentioned above between the classical and neoclassical framework when analyzing the critique of mainstream international trade models since the 1980s, because these international trade models are implicitly built upon the neoclassical framework — not the classical framework. As it turned out, the neoclassical framework has important theoretical flaws, which consequently have put into doubt the merits of the theoretic case in favor of free trade.

3.2 Some Critical Remarks on the Neoclassical Framework of International Trade

As already pointed out, Marshall was able to formulate a mathematical solution for the problem of resource allocation by assuming a strict dichotomy between pure consumers and pure producers (firms). The immediate consequence of this assumption is a switch of focus within the neoclassical framework from an individual producer to an artificial entity: the firm.¹¹² At the first sight, such a switch of focus from individuals to firms may seem as a rather necessary and appropriate step for any modern economic theory, since nowadays the overwhelming part of the production and distribution of products and services is carried out by firms and not by individual producers. Further-

¹¹² It is quite an irony that the basic productive unit in the general economic equilibrium paradigm, whose ultimate purpose is to minimize or completely ban government intervention in the economy, is an artificial entity created by the very same government. Historically, individuals have produced and exchanged commodities and services well before the creation of the firm as an institution. After all, a firm is a legal entity that can only exist by laws sanctioned and enforced by a government entity, and therefore presupposes the existence of some sort of government. Individuals, however, have exchanged commodities and services well before the formation of States and governments.

more, the strict dichotomy between consumers and producers seems also supported by the empirical observation that consumers living in economically developed countries indeed do not produce by themselves but a very small percentage — if any — of the commodities and services of their daily consumption. To assume from this undisputed fact, however, that consumers cannot provide by themselves any of the commodities or services that they demand — which is a necessary implication of assuming a strict dichotomy between consumers and firms —, is obviously contrary to practical experience. Nowadays people living in developed countries usually specialize in a very limited range of economic activities and exchange the result of their labor for a wide range of products and services because by doing so, they can often consume a greater amount of commodities and services than with self-provision. A high level of individual specialization is generally regarded as beneficial for labor productivity — a main insight of Smith's analysis regarding the division of labor in the *Wealth of Nations* —, but in most cases the decision regarding the extent of the specialization is still a matter of individual choice.

Besides the arbitrary and unrealistic nature of assuming a strict dichotomy between consumers and producers, it has proven to be very harmful for the evolution of economic thought. As Yang (2001, pp. 8-9) correctly points out, this dichotomy makes Marshall's neoclassical framework incapable of explaining many interesting and important economic phenomena. These include, for example, the emergence of firms, cities, money, middlemen, business cycles, the hierarchical structure of transactions from the division of labor; the evolution of the extent of the market, productivity, comparative advantage, and trade dependency.

In order to explain increases in productivity, the neoclassical framework relies instead rather exclusively on the concept of economies of scale. Marshall was probably aware of the limitations of the concept of economies of scale for explaining the gains in productivity that accrue as a result of the steady progress in the division of labor. After all, gains in productivity often result from factors that are external to an individual firm. Marshall tried to overcome this conceptual shortcoming by distinguishing between internal and external economies of scale. Internal economies of scale correspond to the ordinary definition of economies of scale; that is, a firm's productivity goes up as its operation scale expands. External economies of scale imply that a firm's productivity

goes up as the operation size of the industry or the size of the whole economy expands.¹¹³

Despite their important role within the neoclassical framework, it is quite hard to find satisfactory definitions of external economies in the economic literature. As a matter of fact, external economies have turned out to be one of the most elusive concepts in economic theory. It is agreed that they mean services — and disservices — rendered free — without compensation — by one producer (firm) to another; but there is no agreement on the nature and form of these services or on the reasons for their being free. It is also agreed that external economies are a cause for divergence between private profit and social benefit and thus for the failure of perfect competition to lead to an optimum situation; but for this there are many reasons, and it is nowhere made clear how many and which of these reasons are subsumed under the heading of external economies (Scitovszky, 1954, p. 143). Moreover, it appears that the notion of external economies of scale involves a logical inconsistency, since economies of scale that are external to all firms are an *empty economic box* (Knight, 1925, p. 333).

Compared to the classical analysis based on the division of labor, the neoclassical emphasis on economies of scale seems rather partial and insufficient for explaining the broader economic benefits of specialization. Gains in productivity that result from the progress of the division of labor cannot be fully explained by observing only the size of an individual firm or a particular industry. Important aspects like the progressive subdivision and specialization of industries¹¹⁴, which should be considered external to an

¹¹³ See Marshall (1920, p. 314).

¹¹⁴ Allyn Young (1928, p. 537-538) brings up the following example of progressive subdivision and specialization of industries: *“The successors of the early printers, it has often been observed, are not only the printers of to-day, with their own specialised establishments, but also the producers of wood pulp, of various kinds of paper, of inks and their different ingredients, of typemetal and of type, the group of industries concerned with the technical parts of the producing of illustrations, and the manufacturers of specialised tools and machines for use in printing and in these various auxiliary industries. The list could be extended, both by enumerating other industries which are directly ancillary to the present printing trades and by going back to industries which, while supplying the industries which supply the printing trades, also supply other industries, concerned with preliminary stages in the making of final products other than printed books and newspapers. I do not think that the printing trades are an exceptional instance, but I shall not give other examples, for I do not want this paper to be too much like a primer of descriptive economics or an index to the reports of a census of production. It is sufficiently*

individual firm or industry but have an important effect of a firm's productivity, are mainly left out. As Allyn Young (1928, p. 539) correctly points out, the use of the notion of large-scale production misses the phenomenon of economies of division of labor, and "(...) *the mechanism of increasing returns is not to be discerned adequately by observing the effects of variations in the size of an individual firm or of a particular industry, for the progressive division of labor and specialization of industries is an essential part of the process by which increasing returns are realized.*"

Therefore, the distinction between internal and external economies necessarily implies a partial view of the nature of industrial production. Industrial operations, though, should be seen as an interrelated whole. Moreover, internal and external economies of scale are a rather limited and inadequate substitution for the economies of division of labor, which are emphasized in classical political economy.¹¹⁵

Despite the intrinsic vagueness and limitation of the concept of external economies of scale, it has been very popular among neoclassical economists. The reason for this popularity has to be found in the usefulness of this concept for the general economic equilibrium paradigm, since internal economies of scale would lead to imperfect competition, which is said to be incompatible with a state of equilibrium.

It is indeed a deep underlying belief, shared by all economists of the neoclassical school of economic thought, that the general economic equilibrium paradigm is the one and only starting point for any logically consistent explanation of the behavior of decentralized economic systems. This belief sustained the theory despite the increasing — not diminishing — arbitrariness of its basic assumptions, which was forced upon its practitioners by the ever more precise cognition of the needs of logical consistency.

An enumeration and extensive analysis of each of these basic assumptions would lead too far away from the main subject of this thesis. It seems enough to state that unlike many scientific theories, where the basic assumptions are chosen on the basis of direct observation, the basic assumptions of general economic equilibrium paradigm are either

obvious, anyhow, that over a large part of the field of industry an increasingly intricate nexus of specialised undertakings has inserted itself between the producer of raw materials and the consumer of the final product."

¹¹⁵ Supply and demand can also be seen as the two sides of the division of labor.

of a kind that are unverifiable — such as that producers maximize their profits or consumers maximize their utility — or of a kind which are directly contradicted by observation — for example, perfect competition, perfect divisibility, linear-homogenous and continuously differentiable production functions, wholly impersonal market relations, exclusive role of prices in information flows and perfect knowledge of all relevant prices by all agents and perfect foresight (Kaldor, 1972, p. 1238).

Taken at its purest and most abstract level, the pretensions of general economic equilibrium theory are modest enough. Although Debreu describes the subject matter of his book as “*the explanation of the price of commodities resulting from the interaction of the agents of a private ownership economy*”, it is clear that the term *explanation* is not used in the ordinary everyday sense of the term. It is intended in a purely logical and not in a scientific sense; in the strict sense, as Debreu himself states, the theory is logically entirely disconnected from its interpretation. It is not put forward as an explanation of how the actual prices of commodities are determined in particular economies or in the world economy as a whole.¹¹⁶ By the term *explanation* Debreu means a set of theorems that are logically deducible from precisely formulated assumptions; and the purpose of the exercise is to find the minimum basic assumptions necessary for establishing the existence of an *equilibrium* set of prices (and output/input matrixes) that is unique, stable, and satisfies the conditions of Pareto optimality. The scientific effort during the last decades has been oriented towards finding these minimum requirements, without any attempt at verifying the realism of those assumptions, and without any investigation of whether the resulting theory of equilibrium prices has any explanatory power or relevance in relation to actual prices.

In terms of gradually converting Debreu’s “intellectual experiment” into a scientific theory — in other words, into a set of theorems directly related to observable phenomena — the development of economic theory was one of continual digress, not progress: the ship appears to be much further away from the shore now than it appeared to its originators in the nineteenth century. The latest theoretical models, which attempt to construct an equilibrium path through time with all prices for all periods fully deter-

¹¹⁶ See Debreu (1959, p. vii).

mined at the start under the assumption that everyone foresees future prices correctly to eternity, require far more fundamental *relaxations* for their applicability than was thought to be involved in the original Walrasian scheme. The process of relaxing the unreal basic assumptions — also known as the process of “scaffolding” — has not yet started. Indeed, the scaffolding gets thicker and more impenetrable with every successive reformulation of the theory, with growing uncertainty as to whether there is a solid building underneath (Kaldor, 1972, pp. 1238-1239).

Yet the main conclusions of this increasingly abstract and unreal theoretical construct, as Kaldor critically observes, are also increasingly taken on trust — as if in the social sciences, unlike the natural sciences, the problem of verification could be passed over or simply ignored. Kaldor states:

It is generally taken for granted by the great majority of academic economists that the economy always approaches, or is near to, a state of equilibrium; that equilibrium, and hence the near-actual state of the world, provides goods and services to the maximum degree consistent with available resources; that there is full and efficient utilisation of every kind of resource; that the wage of every kind and quality of labour is a measure of the net contribution (per unit) of these varying kinds and qualities of labour to the total product; that the rate of profits reflects the net advantage of substituting capital for labour in production, etc., — all propositions which the pure mathematical economist has shown to be valid only on assumptions that are manifestly unreal — that is to say, directly contrary to experience and not just *abstract*. In fact, equilibrium theory has reached the stage where the pure theorist has successfully (though perhaps inadvertently) demonstrated that the main implications of this theory cannot possibly hold in reality, but has not yet managed to pass his message down the line to the textbook writer and to the classroom (Kaldor, 1972, p. 1240).

The general economic equilibrium paradigm has set the precedent for today’s ubiquitous practice in mainstream economic theory of making arbitrary assumptions in order to obtain logical proofs, without taking into consideration the factual truth of these assumptions, or the further consequences which result from formulating a theory based on them. Therefore, the powerful attraction of the habits of thought engendered by equilibrium economics has turned into a major obstacle to the development of economic theory (Addleson, 1995).

A direct consequence of adopting the general economic equilibrium paradigm as the main theory of value and distribution has been the marginalization and subsequent omission of any references to the classical labor theory of value in economic theory. This can be verified by analyzing the two traditional models of international trade, the

so-called *Ricardian* model and Heckscher Ohlin model, which are built upon the neoclassical framework. From chronological as well as logical considerations, which will be evident to the reader later on, the starting point has to be the *Ricardian* model.

3.3 Neoclassical Models of International Trade

3.3.1 The “Ricardian” Model

The concept of comparative advantage has occupied a prominent place within the neoclassical international trade theory. Neoclassical economists have taken over Ricardo’s proposition that a country would import a certain amount of a commodity although it can produce the same amount at lower real costs than the exporting country, converting it into the basic model of international trade, the so-called *Ricardian* model of international trade.

Turning Ricardo’s demonstration of the above proposition into a neoclassical international trade model amounts to a *tour de force*, which cannot be successfully accomplished without omitting the main purpose and altering the internal logic of the original numerical example. Thus, one should not be surprised to find out that the majority of neoclassical economists have carefully avoided quoting directly from the *Principles*, although they have kept crediting Ricardo for the formulation of comparative advantage. Obviously, they have felt quite uncomfortable with the original numerical example. Another indication for the troubles that the neoclassical economists have had with Ricardo’s propositions is that there is no standardized and generally accepted definition of comparative advantage in neoclassical textbooks. Having said that, let us blank out for a moment section 2.4 of this doctoral thesis and present the *Ricardian* model of international trade without any critical references first, leaving the necessary critique for the aftermath.

One can find many variations of the *Ricardian* model in modern economic textbooks. While most textbook authors neither quote directly from the *Principles* nor use Ricardo’s original numbers, a few of them formulate numerical examples that come very close to

the original.¹¹⁷ In either case, though, the numbers are always defined as labor costs necessary for producing a single unit of the commodities traded in the respective countries.¹¹⁸ These unitary labor costs are supposed to remain constant regardless the amounts of the commodities produced. Because the subsequent analysis is meant to be valid for every version of the *Ricardian* model, it might be useful to use parameters instead of specific numbers. The following example is taken from Ruffin (2002).

There are two countries, home and foreign, that produce commodities 1 and 2 (foreign quantities are designated by an asterisk). The two commodities are produced by a single factor of production, labor, and each unit of commodity i requires a_i (a_i^*) units of labor in the home (foreign) country, which stays constant regardless the amount of goods produced. There is perfect mobility of labor between industries in the same country, but immobility of labor between countries. The relative cost of commodity 1 is cheaper in the home country, so that $a_1/a_2 < a_1^*/a_2^*$. Let p_i be the world price of good i in some imaginary world currency.

Since $1/a_i$ is the output of one unit of labor, the value of that output is simply p_i/a_i , which represents the earning of the worker per unit of labor. If there were no international trade, both commodities would have to be produced at home and workers would allocate themselves so that earnings were the same in both occupations, that is, $p_1/a_1 = p_2/a_2$. The simple labor theory of Smith and Ricardo holds in autarky.

But with international trade, and the prices of the two goods being the same everywhere (tariffs or transport costs are ruled out), it must be that:

$$a_1/a_2 \leq p_1/p_2 \leq a_1^*/a_2^* \quad (1)$$

¹¹⁷ See Caves et al. (1993), Kenen (1994) and Krugman & Obstfeld (2000) for the first approach, Haberler (1936), Viner (1937) and Dunkley (2004) for the second approach.

¹¹⁸ For example, Gottfried Haberler (1936, p. 128) begins his analysis of the theory of comparative cost by asserting the following: “In chapter VII of his *Principles* he [Ricardo] gives the following celebrated example: In England a unit of cloth costs 100 and a unit of wine 120 units of labour; in Portugal a unit of cloth costs 90 and a unit of wine 80 units of labour.” Jacob Viner (1937, p. 445) presents a table containing the same four numbers, described as the amounts of “labor required for producing a unit” of cloth and wine in UK and Portugal.

If (1) were not true, for example $p_1/p_2 < a_1/a_2 < a_1^*/a_2^*$, then it follows that in both countries $p_1/a_1 < p_2/a_2$ and $p_1/a_1^* < p_2/a_2^*$. In that case, however, workers in both countries would migrate to the industry that produces the commodity 2, because they can earn more money than in industry 1. As long as commodity 1 is demanded, its price would have to rise relative to commodity 2 until the inequality (1) is reestablished.

When (1) holds, it always pays the home country to produce the commodity 1 and the foreign country to produce commodity 2 because workers move to the high-paying industry. If the price ratio is strictly in between the two labor-cost ratios, both countries will be completely specialized.

This is a succinct formulation of the *Ricardian* model that can be found in any modern economic textbook. It explains the commodity composition of international trade by a single cause: persistent differences in the productivity of labor between nations, which are the result of employing different production technologies. These technological differences are supposed to be persistent, because the unitary labor costs in the two countries differ and are assumed to remain constant.¹¹⁹

The assumption of persistent technological differences between countries seems to suggest either that there are cultural barriers that preclude the less developed country from emulating the productive techniques of the advanced country, or that the latter can effectively prevent the emulation of its technological advantages by other countries. Both explanations for the persistency of technological differences between countries may be valid in the short run, but they are not particularly convincing in the long run. One may find plenty of historical examples where a backward country initially copies and later improves the production technologies of advanced countries. Japan, the second largest economy after the United States, is probably the best example in recent economic history.

¹¹⁹ This neoclassical version of comparative advantage is firmly established even in the minds of scholars who have been critical to the neoclassical paradigm. For example, Blaug (1993, p. 185) affirms: “Ricardo found the cause of foreign trade in the relative immobility of capital across national frontiers and he explained the commodity composition of world trade by persistent differences in the productivity of labor between nations; by assuming that relative commodity prices vary proportionally with relative labor costs, he showed that free trade will cause each country to export those goods in which it possessed a comparative price advantage and that such trade will result in mutual gains as compared to a state of self-sufficiency.”

Moreover, singling out technological differences as the only cause for international trade has an important limitation: it cannot explain trade between national economies that are at the same level of economic development. With countries achieving similar levels of economic development and technological differences among them eroding over time, the single cause for international trade according to the *Ricardian* model would disappear and the national economies would become autarkies with no reason to trade with each other.

These problems associated with the *Ricardian* model of international trade have led to the formulation of a genuine neoclassical model of comparative advantage: the Heckscher-Ohlin model (H-O model). This international trade model owes its academic reputation to the fact that it offers an alternative explanation for international trade. Instead of technological differences, the H-O model identifies the differences in factor endowments as the primary cause for international trade, assuming that the production technology is identical everywhere. A brief overview of the H-O model will be given in the following section.

3.3.2 The Heckscher-Ohlin Model

3.3.2.1 Antecedents and Assumptions

The Heckscher-Ohlin model (H-O model) was first sketched by Swedish economist Eli Heckscher in a seminal 1919 article, and later refurbished and expanded by his student Bertil Ohlin in *Interregional and International Trade* (1967).¹²⁰ In its present form, though, the H-O model is the result of several articles published by Samuelson in the late 1940s and early 1950s.¹²¹ Therefore, it is sometimes called the *Heckscher-Ohlin-Samuelson* model. The standard Heckscher-Ohlin model contains two countries that produce two commodities employing two homogenous factors of production. Therefore, some authors refer to it as the $2 \times 2 \times 2$ model.

¹²⁰ The book was originally published in 1933.

¹²¹ See, for example, Samuelson (1948; 1949).

The H-O model has several assumptions in common with the *Ricardian* model, for example, constant return to scale and perfect factor mobility within a country. The latter means that capital and labor can be redeployed to produce different commodities, and this is supposed to happen at no cost. But the H-O model departs from the *Ricardian* model in two important aspects: 1) it incorporates capital as the second factor of production; and 2) it assumes that the production technologies for the two commodities are identical in both countries. The subsequent analysis will be centered on the second difference, while the first disparity will be omitted at this point.

The H-O model differs from the *Ricardian* model most drastically by assuming that the production functions available in each country are identical, which means that producing the same output of either commodity *could* be done with the same technology — i.e., the same proportion of labor and capital — in either country. The H-O model assumes that the only difference between countries is the relative abundances of labor and capital.

Factor endowment in a country is defined by the ratio of capital (K) to labor (L). If the capital-labor ratio in the home country (h) is greater than in a foreign country (f), the home country is said to be relatively capital-abundant (and labor-scarce), while the foreign country is labor abundant (and capital-scarce). This can be stated as

$$(K/L)_h > (K/L)_f \quad (1)$$

The production of the two commodities is said to require different factor proportions. The production of commodity y is relatively capital-intensive and commodity x is relatively labor-intensive if the capital-labor ratio used for producing y is higher.

$$(K/L)_y > (K/L)_x \quad (2)$$

For example, developed countries have a comparatively high ratio of capital to labor in relation to developing countries. This makes the developed country capital-abundant relative to the developing country, and the developing country labor-abundant in relation to the developed country. Based on these assumptions, economists have derived four theorems of the H-O model, which will be presented in the next section.

3.3.2.2 The Four Theorems of the H-O Model

The H-O model culminates in what is now generally known as the *Heckscher-Ohlin theorem* (HOT) of the pattern of international trade: a country exports those commodities whose production entails an intensive use of the country's relatively abundant factor of production and imports the commodities whose home production would entail an intensive use of the country's relatively scarce factor of production.¹²²

According to the HOT, relative endowments of labor and capital determine a country's comparative advantage in certain commodities. Countries have a comparative advantage in those commodities for which the required factors of production are relatively abundant locally. This is because the commodity prices are ultimately determined by the input prices. Therefore, commodities that require inputs that are locally abundant will be cheaper to produce than those commodities that require inputs that are locally scarce. For example, a country where capital and land are relatively abundant but labor is scarce will have a comparative advantage in producing commodities that require a high amount of capital and land, but little labor. Labor-intensive commodities on the other hand will be very expensive to produce since labor is scarce and its price is high. Therefore, the country is better off importing those commodities.

From the HOT have emerged three related corollaries that describe the responsiveness of output and factor prices to changes in output prices and factor supplies. The Polish economist Tadeusz Rybczynski stated a corollary of the HOT in a paper published in 1955, whose purpose was to investigate the effect of an increase in the quantity of a factor of production upon production, consumption and the terms of trade, thus linking outputs to factor supplies under given output prices and full employment (Rybczynski, 1955, p. 336).

The Rybczynski theorem states that “(...) *the maintenance of the same rates of substitution in production after the quantity of one factor has increased must lead to an absolute expansion in production of the commodity using relatively much of that factor, and to an absolute curtailment of production of the commodity using relatively little of the same factor*” (Rybczynski, 1955, pp. 337-338). Fur-

¹²² See Maneschi (1998).

thermore, this leads to a worsening in the terms of trade or the relative price of the commodity using relatively much of the factor whose quantity has increased.¹²³

Paul Samuelson and Wolfgang Stolper derived another theorem from within the framework of the H-O model back in 1941. The *Stolper-Samuelson theorem* describes a relation between factor prices — i.e. real wages and real returns to capital — and output prices, holding fixed factor supplies. The theorem states that — under some economic assumptions — a rise in the relative price of a commodity will lead to a rise in the return to that factor which is used most intensively in the production of this commodity, and conversely, to a fall in the return to the other factor.

Worried that their theorem could be served as an argument in favor of protection, Stolper and Samuelson (1941, p. 73) state:

“We are anxious to point out that even in the two factor case our argument provides no political ammunition for the protectionist. For if effects on the terms of trade can be disregarded, it has been shown that the harm which free trade inflicts upon one factor of production is necessarily less than the gain to the other. Hence, it is always possible to bribe the suffering factor by subsidy or other redistributive devices so as to leave all factors better off as a result of trade.”

As first presented by Stolper and Samuelson, the theorem was obtained under very restrictive assumptions. However, subsequent theoretical work has shown that essential features of the theorem hold much more generally. For example, Jones and Scheinkman (1977) show that with many goods and factors, a tariff change will always raise the real return of at least one factor and lower the real return of at least one other factor. This generalization of the Stolper-Samuelson theorem does not contradict the basic prediction of international trade theory that economies facing fixed world prices will gain overall from tariff reductions. However, it highlights the potential for distributional conflict over trade policy. Unless compensation for income losses is actually paid, there are always both winners and losers from any change in trade policy.

Another key assumption is that all factors are fully mobile between sectors. Relaxing this for one of the two factors in the simplest case yields the *specific-factors model*, which provides an illuminating contrast with the Heckscher-Ohlin model. In line with the gen-

¹²³ See Rybczynski (1955, p. 339).

eral results of the last paragraph, protection continues to raise the real return of one factor, the one specific to the import-competing sector, and to lower the real return of another factor, that specific to the export sector. However, its effect on the real return of the mobile factor is now ambiguous. The specific-factors model can also be viewed as depicting a short-run equilibrium. Over time, the specific factors lose their distinctiveness and become intersectorally mobile, so the Stolper-Samuelson predictions are restored.¹²⁴

Among many applications, the Stolper-Samuelson theorem has been used to address the trade-and-wages debate. This asks to what extent globalization in general, and increased imports from low-wage countries in particular, are responsible for widening the differential between skilled and unskilled wages in developed countries. The original Heckscher-Ohlin model was a two-factor model with a labor market specified by a single number. Therefore, the early versions of the theorem could make no predictions about the effect on the unskilled labor force in a high-income country under trade liberalization. However, more sophisticated models with multiple classes of worker productivity have been shown to produce the Stolper-Samuelson effect within each class of labor: Unskilled workers producing traded goods in a high-skill country will be worse off as international trade increases, because, relative to the world market in the good they produce, an unskilled first world production-line worker is a less abundant factor of production than capital. The results of these models are consistent with a widening differential, though most authors have preferred to explain the fall in demand for unskilled labor by skill-biased technological progress.

Finally, the Stolper-Samuelson theorem is closely linked to the *factor-price-equalization theorem* (FPET), which is the third corollary of the HOT. The FPET states that under a number of special conditions¹²⁵, and regardless of international factor mobility, factor

¹²⁴ See Neary (1978).

¹²⁵ According the Blaug (1993, p. 186), these assumptions are: perfect competition, zero transport costs, incomplete specialization, identical linearly homogeneous production functions, identical homothetic preferences, absence of external economies, constant relative factor intensities at all relative factor prices, factors homogeneous in quality, and the number of factors no greater than the number of commodities.

prices will tend to equalize across countries that do not differ in technology.¹²⁶ Thus, this theorem deals with the responsiveness of factor prices to factor supplies, holding fixed output prices.

After having briefly sketched the main theoretical models and theorems that form the neoclassical case for free trade, I will proceed with a critique of the neoclassical theory in the following section. The starting point will be a comparison between the *Ricardian* model and Ricardo's original propositions on international trade.

3.4 A Critique of the Neoclassical Models of International Trade

3.4.1 Ricardo versus the *Ricardian* Model

To begin with, it is important to realize that one always has to distinguish between the *Ricardian* model and what Ricardo really wrote in chapter 7 of the *Principles*, taking the later as the original and the former merely as a *rational reconstruction* (Blaug, 1999) of Ricardo's thoughts by others. Following this crucial distinction, it is rather easy to recognize that the *Ricardian* model departs in key aspects — main purpose, logical construction, assumptions and implications — from Ricardo's numerical example in chapter 7 of the *Principles*. Let's start with the disparity regarding the main purposes between the *Ricardian* model and the original numerical example.

First and foremost, the *Ricardian* model omits any reference to the main purpose of Ricardo's numerical example, which is to prove the new proposition that the labor theory of value does not determine international prices when the factors of production are immobile between countries. Instead, the *Ricardian* model concentrate on proving a corollary of this proposition — i.e. that a country might import a certain amount of cloth from another country although the former has a real labor cost advantage over the later in producing the amount of the commodity traded at home — without making any

¹²⁶ Stolper and Samuelson (1941, p. 59) state: “And as a result of the shift towards increased production of those goods in which the abundant factors predominate, there will be a tendency — necessarily incomplete — towards an equalization of factor prices between the two or more trading countries. It is clear that the equalization is only partial because otherwise we would be involved in the contradiction that differences in comparative cost would disappear, and there would be no trade.”

reference to the labor theory of value. Without this reference to the main proposition, though, the corollary highlighted in the *Ricardian* model seems counterintuitive and rather difficult to understand.

As a consequence of this omission, it is hard to grasp the rigorous logic and elegance of Ricardo's proof. The starting point of Ricardo's original numerical example is a specific exchange that is already taken place between England and Portugal. The labor quantities required for the production of the traded commodities in the respective countries are chosen in accordance with the classical rule for specialization, so that both countries have an interest, independently from each other, in the exchange of English cloth for Portuguese wine, because it enables each country to save a specific amount of labor. The exchange featured in Ricardo's numerical example, though, clearly contradicts the labor theory of value, because England is giving the output of a 100 men's labor in exchange for the output of only 80 Portuguese. However, this should not be seen as a problem, because the non-appliance of the labor theory of value in international trade when labor is immobile between countries is precisely the main proposition that Ricardo wants to prove with the numerical example. This also explains why he only takes into consideration the real labor costs of producing cloth and wine in the respective countries, abstracting from the costs of the other factors of production.

In the *Ricardian* model, as already pointed out, the exclusive emphasis is given on the corollary while omitting any reference to the main proposition regarding the labor theory of value. As a result of this omission, later economists have found it rather difficult to grasp the theoretical antecedents and logical fundamentals of Ricardo's numerical example. The usual reaction — starting with John Stuart Mill — has been to reprimand Ricardo for his *careless* and *defective* demonstration, and to try to correct the alleged imperfections of the numerical example. Consequently, Ricardo's rigorous and elegant yet simple proof of chapter seven of the *Principles* has been "corrected" and "enriched" with a different logical construction and additional assumptions that later on have proven to be very problematic for the free-trade case.

In terms of logical construction, the main difference between Ricardo's numerical example and the *Ricardian* model is that in the later the four numbers are defined as unitary real labor costs of producing cloth and wine in the respective countries, while in the former they are defined as the labor necessary to produce the amounts of the commodi-

ties actually traded. Consequently, Ricardo starts with the terms of trade, whereas in the *Ricardian* model the terms of trade are not explicitly specified.

The logical construction followed in the *Ricardian* model has led to a confusion regarding the relevant cost comparison for international specialization, since the relevant cost comparison in the *Ricardian* model appears to be the unitary labor costs of the same commodity in the respective countries. For Ricardo, though, the relevant cost comparison for international specialization is always the one between home production and importing, in correspondence with the classical rule for specialization.

Furthermore, the logical construction followed in the *Ricardian* model requires several assumptions, which are not necessary in Ricardo's numerical example. An immediate implication of taking unitary labor costs as the basis for the numerical example is the logical requirement of assuming constant labor costs. The *Ricardian* model is heavily dependent on this assumption, because with variable unitary labor costs it would be very difficult to identify the most beneficial pattern of international specialization.

Furthermore, in the *Ricardian* model it is assumed that there are no transportation costs. This assumption seems to be implicit in Ricardo's numerical example as well, since there is no explicit reference to the cost of carrying the commodities from one country to the other in the original numerical example. Ricardo, however, *abstracts* from the transportation costs, which is quite different then assuming that there are no transportation costs at all. One has to remember that Ricardo builds his numerical example on the amounts of cloth and wine currently traded between England and Portugal. This logical construction allows an abstraction from the costs of transportation, because they are usually included in the value of the commodities imported and exported.

According to the logical construction of the *Ricardian* model, however, the assumption of zero transportation costs is neither the result of an abstraction nor an omission but a consequence of assuming constant labor costs. Transportation costs per unit usually depend on the amount of the commodities transported: the more commodities are transported in a single lot, the less is the cost of transportation per unit. Therefore, taking into consideration the costs of transportation would infringe the constant labor cost assumption. The alternative option to assume that the transportation costs per unit also remain constant defies the most elementary notion of reality.

Finally, the *Ricardian* model also assumes perfect internal mobility of the factors of production. It has often been said that the classical political economists — first and foremost Smith and Ricardo — considered that the factors of production would move to the production of other commodities smoothly enough so that the costs of free trade would not outweigh the benefits. A careful consultation of the *Wealth of Nations* and the *Principles* proves that neither Smith nor Ricardo ever assumed perfect internal mobility of the factors of production. On the contrary, they were quite concerned about the negative consequences — capital may have sunk (irrecoverable) costs and workers may find it hard to get new jobs at equivalent pay — of any sudden short-term adjustment in international trade, advocating protection on a temporary basis.¹²⁷ Ricardo, for example, states:

From contingencies of this kind, though in an inferior degree, even agriculture is not exempted. War, which in a commercial country, interrupts the commerce of States, frequently prevents the exportation of corn from countries where it can be produced with little cost, to others not so favourably situated. Under such circumstances an unusual quantity of capital is drawn to agriculture, and the country which before imported becomes independent of foreign aid. At the termination of the war, the obstacles to importation are removed, and a competition destructive to the home-grower commences, from which he is unable to withdraw, without the sacrifice of a great part of his capital. The best policy of the State would be, to lay a tax, decreasing in amount from time to time, on the importation of foreign corn, for a limited number of years, in order to afford to the home-grower an opportunity to withdraw his capital gradually from the land. In so doing, the country might not be making the most advantageous distribution of its capital, but the temporary tax to which it was subjected, would be for the advantage of a particular class, the distribution of whose capital was highly useful in procuring a supply of food when importation was stopped. If such exertions in a period of emergency were followed by risk of ruin on the termination of the difficulty, capital would shun such an employment. Besides the usual profits of stock, farmers would expect to be compensated for the risk which they incurred of a sudden influx of corn; and, therefore, the price to the consumer, at the seasons when he most required a supply, would be enhanced, not only by the superior cost of growing corn at home, but also by the insurance which he would have to pay, in the price, for the peculiar risk to which this employment of capital was exposed. Notwithstanding, then, that it would be more productive of wealth to the country, at whatever sacrifice of capital it might be done, to allow the importation of cheap corn, it

¹²⁷ See, for example, Smith (1776, I, p. 491).

would, perhaps, be advisable to charge it with a duty for a few years (Vol. I, p. 266-268).¹²⁸

Taking into account these significant differences in terms of main purpose, logical construction and assumptions between Ricardo's original numerical example and the *Ricardian* model, it seems natural to expect different theoretical implications as well, for example, regarding the extent of the specialization. The *Ricardian* model implies, of course, complete specialization by each trading partner according to its comparative advantage. Yet Ricardo himself explicitly refers in a note to partial specialization:

"It will appear then, that a country possessing very considerable advantages in machinery and skill, and which may therefore be enabled to manufacture commodities with much less labor than her neighbors, may, in return for such commodities, import *a portion* of the corn required for its consumption, even if its land were more fertile, and corn could be grown with less labor than the country from which it was imported" (Vol. I, p. 136ff.; emphasis added).

According to Ricardo, even if a country were much more advanced in manufacturing than its neighbors, it would still satisfy part of its national demand for corn by home production. What does *complete specialization* actually mean when applying the classical rule for specialization? It means that a country following a free trade policy would end up completely specialized in the production and exportation of a single type of commodity, for example cloth. It would do so if, by exporting cloth, it could procure all other commodities demanded by its residents at lower real costs than by producing them internally. Therefore, complete specialization is a very unlikely outcome of free trade, theoretically possible only for a scarcely populated country.

Finally, the *Ricardian* model explains international specialization and the commodity composition of international trade by a single exogenous cause: persistent differences in labor productivity among countries. Ricardo, however, explains the benefits of international specialization and the actual commodity composition of international trade by the gains in labor productivity in the home country, and explicitly mentions several sources

¹²⁸ Ricardo's analysis, for example, fits quite well to the situation faced by many Latin American manufacturers after the termination of WW I, when they had to confront increased competition from European manufacturers.

— not a single source as the *Ricardian* model — for having a comparative advantage in the production of certain commodities.¹²⁹

Taking into consideration all these significant differences between the *Ricardian* model and Ricardo's original numerical example, the continued association of this international trade model with Ricardo's name seems highly misleading und unjustified. The so-called *Ricardian* model of international trade has actually very little in common with the main purpose and logical construction of the numerical example which can be found in chapter 7 of the *Principles*. Consequently, the current denomination should be dismissed and replaced by a more appropriate one, for example the *Constant Unitary Labor Costs Model* (CULC), which highlights the main features of this theoretical model of international trade, or (John Stuart)-Mill's model of international trade, which directly refers to the original misinterpreter of Ricardo's numerical example.

Many neoclassical trade theorists have propagated a misinterpretation of Ricardo's numerical example under a misleading label. For any supporter of the general equilibrium paradigm, John Stuart Mill's misunderstanding of the main purpose and logical construction of Ricardo's numerical example is indeed very convenient, because the original numerical example refers directly to the labor theory of value, which is of course the Ricardian theory of value and distribution — the rival and very opposite of general equilibrium economics. That is precisely why many neoclassical economists may still appreciate Mill's incorrect restatement of Ricardo's numerical example. Nevertheless, it seems inaccurate to regard the CULC model as a neoclassical international trade model, since John Stuart Mill is usually considered to be a member of the classical school of economic thought. Consequently, any critique of neoclassical models of international trade should be mainly concentrated on the H-O model, which is a genuine neoclassical model of international trade.

¹²⁹ Ricardo states: “It is quite as important to the happiness of mankind, that our enjoyments should be increased by the better distribution of labour, by each country producing those commodities for which by its situation, its climate, and its other natural and artificial advantages, it is adapted, and by their exchanging them for the commodities of other countries, as that they should be augmented by a raise in the rate of profits” (Vol. I, p. 132).

3.4.2 Some Critical Remarks on the Heckscher-Ohlin Approach

The great tragedy of Science — the slaying of a beautiful hypothesis by an ugly fact.

Thomas H. Huxley

A scholar familiar with what is branded nowadays as the Heckscher-Ohlin model of international trade will be quite surprised when actually reading the main works of Eli Heckscher and Bertil Ohlin. To begin with, the scholar will not find in the original works the precise two-by-two model, which has been extracted and distilled from the writings of Heckscher and Ohlin by other scholars. The genuine economic theory of the two Swedish economists is mainly verbal, whereas today's standard version of the H-O model has a high degree of mathematical formalization. Furthermore, as Flam and Flanders point out (1991), of the four theorems currently associated with the H-O model, only two are explicitly stated in the original writings: (1) the Heckscher-Ohlin theorem; and (2) the factor-price equalization theorem. This second theorem, however, is announced but only to be refuted on both theoretical and empirical grounds. According to Flam and Flanders (1991), neither the Stolper-Samuelson nor the Rybczynski theorems are spelled out in the original writings of Heckscher and Ohlin.

More importantly, Ohlin's steady concern about being realistic and incorporating real-world features into his economic theory is completely absent in the standard version of the H-O model. On the contrary, the H-O model relies heavily on assumptions which Ohlin himself has repeatedly criticized in his writings. The H-O model, for example, assumes complete intracountry mobility and total intercountry immobility of factors of production, although Ohlin explicitly rejected both assumptions because he considered them to be unrealistic.¹³⁰ According to him, neither total immobility nor perfect mobility of the factors of production was an appropriate assumption; the real world is to be described in terms of partial mobility of the factors of production within as well as between countries. Moreover, the H-O model also assumes constant returns to scale, while Ohlin considered economies of scale to be a major factor in explaining interna-

¹³⁰ See Heckscher and Ohlin (1991, pp. 115 ff.).

tional trade. In fact, he ranked economies of scale as equal in importance to differences in factor endowments.¹³¹

I have just mentioned the most evident differences between the original writings of Heckscher and Ohlin, on the one hand, and the standard version of the H-O model, on the other. With the appropriate amount of time and dedication, it is possible to bring to light some additional differences. Due to this significant level of divergence between the H-O model and the original writings of Heckscher and Ohlin, an accurate critical review would require as a prerequisite to draw a clear line of separation between the two, but such an endeavor is beyond the scope of this doctoral thesis.

Despite the significant differences, the H-O model and the original writings of Heckscher and Ohlin share a common theoretical approach towards international trade, which can be denominated as the *Heckscher-Ohlin approach*. Two general elements of this approach can be easily identified: (1) the critique and rejection of the classical theory of international trade, and, consequently, the aspiration of formulating an alternative to this theory; and (2) its close association with the general economic equilibrium paradigm. The following critical remarks will be centered on these two elements of the Heckscher-Ohlin approach.¹³²

The Heckscher-Ohlin approach to international trade has often been presented as an important innovation with respect to the classical theory of international trade, particularly to Ricardo's comparative-advantage insight. However, if Heckscher's alleged innovation consists of attributing disparities in comparative costs to dissimilarities in factor endowments rather than to innate and unchanging differences in labor productivity — as highlighted in the CULC-model —, it might be regarded as an innovation with

¹³¹ Ohlin states: “There are thus two causes of interlocal trade: (1) differences in endowments of productive factors and (2) the limited divisibility of these factors, that is, the advantages of large-scale production” (Heckscher & Ohlin, 1991, p. 83). See also Ohlin (1967, p. 73-74).

¹³² This means that the well-known debates about the empirical validity of particular theorems of the H-O model will not be reproduced here. Leontief (1953) empirically proved that despite the USA being endowed with an abundance of capital, US imports were relatively more capital-intensive than US exports, which is in contradiction with the Heckscher-Ohlin theorem (HOT) of the pattern of international trade. The tendency towards factor-price equalization has been challenged by James and Pearce (1951-1952).

respect to this particular model of international trade, but it can hardly be considered as a novelty with respect to Ricardo's and Smith's international trade theory, as Flam and Flanders (1991, p. 1) wrongly claim. Both Smith and Ricardo had clearly anticipated *Heckscher's brilliant idea*¹³³ regarding the importance of the differences in the relative factor supplies and relative factor prices for the determination of comparative advantage and the pattern of international trade.¹³⁴ But instead of assuming the quantities and the productivity of resources to be static and exogenously given — as the Heckscher-Ohlin approach does —, the classical political economists were able to incorporate the longer-run changes in factor supplies and their productivity into their analysis as the outcome of the two major forces of domestic economic development: capital accumulation and the division of labor (Myint, 1977, p. 232). Therefore, rather than as an innovation to classical international trade theory, *Heckscher's brilliant idea* should be seen as an unequivocal proof of his misunderstanding of Ricardo's comparative advantage insight.

Ohlin did not only inherit the *brilliant idea* of his teacher Heckscher, but also his misunderstanding of Ricardo's comparative-advantage insight. This can be easily demonstrated by referring to Ohlin's critique of the classical theory of international trade, where he gives credit first and foremost to John Stuart Mill for stating the proposition that the labor theory of value does not apply to international exchanges, although it is the main proposition that Ricardo wanted to proof with his famous numerical example.¹³⁵

Consequently, Ohlin fails to understand the specific role of the immobility-assumption of the factors of production in Ricardo's comparative-advantage insight. As already pointed out, Ricardo considers the relative difficulty by which the factors of production — capital and labor — move from one country to another as the main reason why his labor theory of value does not regulate the relative value of the commodities exchanged between two or more countries in the same way as it regulates

¹³³ This denomination is taken from Flam and Flanders (1991, p. 1).

¹³⁴ Viner (1937, pp. 500-507), for example, explicitly recognizes the fact that this line of reasoning was not unknown to classical political economists.

¹³⁵ See Heckscher and Ohlin (1991, pp. 204 ff.)

the relative value of commodities within a country. If one day in the distant future both capital and labor would move between country borders in the same way as they already do within country borders, than Ricardo's labor theory of value would regulate the relative value of all commodities, whether they have been produced in the same country or in different countries.

Ohlin considers both the perfect internal mobility and the international immobility of factors of production as unrealistic assumptions. He is certainly right about this, but his critique of classical international trade theory on this subject is unfounded, since neither Ricardo nor Smith ever considered that the factors of production were perfectly mobile within a country but perfectly immobile between countries. Ironically, Ohlin's critique does apply to the H-O model — the neoclassical model of international trade which carries his name —, because this model indeed assumes perfect mobility within the country and complete international immobility of the factors of production.

The real innovative element of the Heckscher-Ohlin approach with respect to classical international trade theory consists in linking the current case for free trade to the general economic equilibrium paradigm. Whereas the attachment of the CULC-model to the general economic equilibrium paradigm can be induced from the persistent omission of the slightest reference to the labor theory of value, the close relationship between the Heckscher-Ohlin approach to international trade and the neoclassical theory of value and distribution is straightforward. After all, Ohlin repeatedly states that the main objective of his research effort is the formulation of an international trade theory that is independent from the classical labor theory of value.¹³⁶

¹³⁶ Ohlin states in the preface to the first edition of his book *Interregional and International Trade* of 1933 that he wants to make a contribution in order "(...) to build a theory of international trade in harmony with the mutual-independence theory of pricing — and thus independent of the classical labor theory of value" (Ohlin, 1967, p. ix). In the essay entitled "Reflections on Cotemporary International Trade Theories", which Ohlin added as Appendix II to the revised edition of 1967, he states: "It still seems very obvious to me that the most natural and advantageous approach to international trade theory is to start from the mutual interdependence price theory that was developed in the last decades of the nineteenth century. The simplest form is probably the Walräs system as modified by Cassel" (Ohlin, 1967, p. 305). Flam and Flanders (1991, p. 13) credit Heckscher and Ohlin for bringing neoclassical price and distribution theory into international trade theory.

Moreover, it seems that the general aim of the so-called *Ohlin-Samuelson research program* is to reduce the case for free trade to a mere extension of the general economic equilibrium paradigm to international trade. If one can theoretically rule out any form of government intervention in the economy, as the supporters of general economic equilibrium theory claim to have accomplished, then one has also ruled out government intervention in international trade. Therefore, the assessment of the Ohlin-Samuelson research program cannot be separated from the assessment of the wider Hicks-Samuelson-Arrow-Debreu general economic equilibrium research program of which it forms an integral part.¹³⁷

As already pointed out, one of the weakest points of the general economic equilibrium paradigm consists of its failure to provide a satisfactory and straightforward explanation for increases in productivity and economic growth. This intrinsic weakness makes it the least suitable theoretic framework for an appealing case for free trade, which should be built upon the beneficial effects of international trade on the productive forces of labor and the economic growth of a country. Consequently, the Heckscher-Ohlin approach cannot integrate the dynamic advantages of international specialization and large-scale operations into its theoretical framework. It is a significant fact that economies of scale are regarded as an *independent* cause — rather than as an integral and interconnected cause — in Ohlin's explanation of the pattern of international trade, along with the relative scarcity of factors of production.¹³⁸

¹³⁷ Thirty years after the publication of his celebrated book, Ohlin appears to recognize that his research effort has not led to the desired result: "In 1933 I still regarded the *mutual interdependence model* and the *factor proportion model* as the foundation of a huge building. All the upper floors in the building had to rest on this base. I now realize that one cannot construct such a building containing all the essential parts of the theory. This becomes most evident when development aspects are the subject of analysis. Yet it would be a mistake to assume that a number of different theoretical models without any natural contact or harmonious relation between them can be accepted as a satisfactory theoretical structure. It is a great merit if the strategic simplifications in each model can be made in such a way that a natural coherence between them becomes evident. In this respect I still maintain that a consistent price theory is superior to a conglomerate of price and real cost analysis of the neoclassical type" (Ohlin, 1967, p. 307).

¹³⁸ See Ohlin (1967, pp. 73-74).

The general economic equilibrium paradigm has not only promoted alternative theoretic models of international trade, but also a different benchmark for judging the merits of free trade, as the following section will show.

3.5 The Neoclassical Benchmark for International Trade

3.5.1 The Welfare Indicator

Neoclassical economists often use a distinctive benchmark for evaluating the merits of alternative international trade policies; instead of the classical benchmark *wealth* or *real national income*, they prefer to measure the so-called *welfare*-effect of trade policy proposals. The concept of *welfare* has been profoundly influenced by utilitarian economists such as Francis T. Edgeworth (1967)¹³⁹, Alfred Marshall (1920) and Arthur C. Pigou (1960)¹⁴⁰. The general aim of utilitarian welfare economics is to provide a general framework for testing the *efficiency* of economic institutions and public policies in making use of the productive resources of the society. This *efficiency* is judged in terms of the Pareto criterion.

Under the Pareto criterion, an outcome is said to be more efficient if at least one person is made better off and nobody is made worse off. Under ideal conditions, exchanges of commodities and services are supposed to be always Pareto efficient since individuals would not voluntarily entered into them unless they were mutually beneficial. In practice, however, exchanges are not always Pareto superior — or even voluntary for that matter. For example, an exchange may not be Pareto superior if it causes considerable external costs to a third party in the form of pollution.

At the first look, the approach of blending considerations regarding economic efficiency and distribution into a single indicator — as the Pareto criterion does —, appears to be a positive step forward in the development of economic analysis; after all, it seems legitimate to judge public policies in democratic societies not only in term of efficiency but also fairness in the sense that nobody should be left worse-off as a consequence of a

¹³⁹ First published in 1881.

¹⁴⁰ First published in 1920.

public policy change. The problem with regard to the Pareto criterion, though, is that it is basically impractical in the real world, since it is doubtful that there is a single economic policy change that matches this criterion.¹⁴¹

Later economists have proposed modifications to the Pareto criterion in order to make it operational. Kaldor states that an activity will contribute to Pareto optimality if the maximum amount the gainers are prepared to pay is greater than the minimum amount that the losers are prepared to accept (Kaldor, 1939). Hicks affirms that an activity will contribute to Pareto optimality if the maximum amount the losers are prepared to offer to the gainers in order to prevent the change is less than the minimum amount the gainers are prepared to accept as a bribe to forgo the change (Hicks, 1939). The Hicks compensation test is from the losers' point of view, while the Kaldor compensation test is from the gainers' point of view.

After some technical problems with the Kaldor criterion and the Hicks criterion were discovered, they were combined into the *Scitovsky criterion*, more commonly known as the *Kaldor-Hicks criterion*, which is supposed to eradicate these flaws. According to the Kaldor-Hicks criterion, an outcome is said to be more efficient if those that are made better off could theoretically compensate those that are made worse off and lead to a Pareto optimal outcome. The key difference between the Pareto and the Kaldor-Hicks criterion is the issue of compensation. Kaldor-Hicks does not require compensation to be actually paid, merely that the possibility for compensation exists, and thus does not necessarily make each party better off (or neutral). Thus, a more efficient outcome can in fact leave some people worse off. Pareto efficiency does require making each party better off (or at least no worse off).

While every Pareto improvement is a Kaldor-Hicks improvement, most Kaldor-Hicks improvements are not Pareto improvements. This is because the set of Pareto improvements is a subset of Kaldor-Hicks improvement, which also reflects the greater flexibility and applicability of the Kaldor-Hicks criterion relative to the Pareto criterion.

¹⁴¹ See Hicks (1939, p. 706): "Under private enterprise, any ordinary change in economic policy involves a change in the price-system, and any change in prices benefits those on one side of the market, and damages those on the other. Thus no simple economic reform can be a permitted reorganisation in our sense, because it always inflicts a loss of some sort upon some people."

For example, in a society with two people, a farmer (F) and a manufacturer (M), suppose initially that F has € 100 and M € 1000. Assume that some economic policy change results in a situation where F ends up with € 200 and M with € 999. This outcome would not be a Pareto improvement since M is now worse off, but it does satisfy the Kaldor-Hicks criterion since F could theoretically pay M anywhere between 1 and 100 Euros to accept the policy change.

3.5.2 Critical Comments on the Welfare Indicator

Taking welfare — instead of wealth — as the central indicator for judging the relative merits of alternative economic policies in general and international trade policies in particular has important consequences for the economic analysis. It implies, first and foremost, taking *utilitarianism*¹⁴² as the starting point for policy prescription.¹⁴³ The neoclassical theory of price determination and distribution is based on the concept of marginal utility.¹⁴⁴ Neoclassical economists use the concept of utility in such constructs as the indifference curve, which plots the combination of commodities that an individual or a society requires to maintain a given level of satisfaction. Individual utility and social utility can be construed as the dependent variable of a utility function — such as an indifference curve map — and a social-welfare function respectively.

Judging the merits of a public policy change in terms of its potential consequences for individual utility and satisfaction opens the door for subjectivism and arbitrariness in economic analysis. Besides the speculative nature of any conjectures regarding the level of utility and satisfaction of an individual, it is not possible to compare the level of utility and satisfaction of two or more individuals, known as the *problem of interpersonal compari-*

¹⁴² The philosophic doctrine of utilitarianism sees the maximization of utility as a moral criterion for the organization of society. According to utilitarians such as Jeremy Bentham and John Stuart Mill, society should aim to maximize the total utility of individuals, aiming for the greatest happiness for the greatest number.

¹⁴³ For the close relationship between the welfare economics and the utility theory, see Hicks (1939) and Sen (1979, 1999).

¹⁴⁴ Despite the neoclassical origin of utilitarian welfare economics, there have been some attempts to associate this doctrine to classical political economy. Scitovsky (1941, p. 77), for example, suggests that classical economists also made *welfare propositions* like perfect competition, free trade and direct taxation.

sons of utility. Without introducing additional arbitrary assumptions like that of equal capacity for satisfaction, an economist is precluded from asserting that a public policy change — for example the repeal of the Corn Laws — would increase the general welfare of the society.¹⁴⁵

The expected distributional effects of the repeal of the Corn Laws may be summarized as follows: (i) it would immediately result in a reduction in the price of corn at home, so that the same money income will now represent a higher real income for consumers; (ii) it would lead to a shift in the distribution of income, because the landlords' real income will be lower than before, and the consumers' real income will be higher. In their role as consumers the landlords may also benefit from a reduction in the price of corn, but their real income losses would be without any doubt higher compared to their pity gains as consumers, resulting in a net loss of real income. Therefore, the repeal of the Corn Laws would result into a *welfare* loss for landowners.

Nevertheless, the repeal of the Corn Laws could be Pareto efficient if it is accompanied by a corrective redistribution of income fully compensating the landowners, financed by a government tax on those who have been favored by the cheapening of corn. Regarding the distributional consequences of this measure, Kaldor (1939, p. 550) states:

But it is always possible for the Government to ensure that the previous income-distribution should be maintained intact: by compensating the "landlords" for any loss of income and by providing the funds for such compensation by an extra tax on those whose incomes have been augmented. In this way, everybody is left as well off as before in his capacity as an income recipient; while everybody is better off than before in his capacity as a consumer. For there still remains the benefit of lower corn prices as a result of the repeal of the duty.

On the issue of whether or not the proposed compensation should be actually granted, Kaldor assumes a positivist point of view, declaring it a subject that is beyond the scope of a *scientific* economist:

Whether the landlords, in the free-trade case, should in fact be given compensation or not, is a political question on which the economist, qua economist, could hardly pronounce an opinion. The important fact is that, in the argument in favour of free

¹⁴⁵ See, for example, Harrod (1938) and Robbins (1938).

trade, the fate of the landlords is wholly irrelevant: since the benefits of free trade are by no means destroyed even if the landlords are fully reimbursed for their losses (Kaldor, 1939, pp. 550-551).

Let's analyze Kaldor's claim that consumers are better off even after the government has granted compensation to the landlords. It seems not clear how consumers may benefit from lower corn prices when the government decides to tax their incomes in order to provide full compensation to the landowners, effectively restoring the previous distribution of income. If that were the case, consumers would not profit from lower nominal corn prices, because their gains in terms of real income would be ultimately transferred to the landlords. That being said, it is true that free trade encourages the productive forces and the aggregate real income of the national economy, but this increase-of-the-pie effect does not occur immediately after the repeal of an onerous duty.

Besides this, Kaldor misses the fundamental issue that by the mere use of the welfare criterion for the evaluation of the distributional consequences of repealing the Corn Laws, the economist automatically concedes to the landlords — a privileged wealthy minority — the proper conceptual framework for justifying or legitimizing compensation, irrespective of the fact that this privileged group has previously benefited from the Corn Laws at the expense of the English consumer. In making the case to preserve the income distribution prior to the repeal of the Corn Laws, utilitarian welfare economics clearly favor the safeguarding of the status quo.¹⁴⁶ Under the strictly classical analysis based on the concept of wealth — i.e. without the reliance on utilitarian welfare criterion — it would be much harder to claim compensation for the landlords. Therefore, the main point of critique towards the utilitarian welfare criterion is that it is an instrument for legitimizing and preserving the status quo in international trade policy.

The above analysis is actually an excellent example for proving that the proposed separation of positive and normative economics is ultimately based on an illusion. Allegedly positive economic theories generally favor a particular distribution of income. The labeling of these theories as *positive* is often merely a crude attempt to shield them from

¹⁴⁶ Scitovszky (1941, p. 79) realizes this implicit preference of utilitarian welfare economics for the status quo, although he does not conclude that the welfare indicator should be therefore dismissed.

criticism of undue partisanship. By separating “objective” positive economics from normative economic policy recommendations, positivist economists want the public to believe that the formulation of economic theories is always the result of a scientifically objective process, whereas the clash of material interests is strictly confined to the sphere of economic policy, an arena which the *scientific economist* should abstain from entering altogether. In the real world, though, the material interests of powerful groups leave their imprints in the formulation of economic theory, although these interests seldom manifest themselves in an evident way. This has to be expected, since any debate on economic policy is very much influenced by the underlying economic theory, which sets the general framework for the political dispute about feasible alternatives. Instead of abstaining from making economic policy recommendations that clearly favor the vast majority of the population, economists should be suspicious and ready to challenge the allegedly objective nature of many economic theories.

Furthermore, by declaring that economists should abstain from making professional statements on issues affecting income distribution, positivists like Kaldor make the economists’ job both sterile and worthless. There is simply no point in soliciting the professional advice of an economic expert on a public-policy issue when the potential benefits of this policy change are universal and non-controversial, except in order to enlighten those brainless individuals who cannot even figure out what their true benefit really is.

As a preliminary conclusion, it is possible to affirm that the classical and the neoclassical cases for free trade are based on different and mutually exclusive theoretical frameworks and international trade models. In the few cases where the neoclassical theory seems to build upon classical concepts and insights, one inevitably discovers that the classical concepts have been tergiversated and distorted in order to make them fit into the neoclassical framework. Furthermore, the neoclassical theory of international trade promotes the use of unrealistic assumptions which are absent in the classical theory of international trade. The two distinct approaches to international trade do not even share the same benchmark for judging the merits of a particular trade policy, as the present section has shown.

Unfortunately, the current mainstream case for free trade is the one promoted by the neoclassical school of economic thought, based on international trade models with un-

realistic assumptions. As a result, economists critical with respect to the merits of free trade have been able to successfully challenge the premises and main propositions of this mainstream case for free trade, diminishing the general support for free trade among scholars and the general public. In the next section the main arguments against free trade will be reviewed in the light of the reformulation of the classical case for free trade of chapter 2.

4 Some Arguments against Free Trade Revisited

4.1 Reviewing the Assumptions of the Free-Trade Case

For it is the premises of the free trader, not his conclusions, that have always been and always must be the object of any effective attack.

Frank D. Graham

Critics of free trade have often pointed out that the supporting theories and models rely heavily on unrealistic and arbitrary assumptions like perfect competition, constant returns to scale, no learning effects, full employment, small-country terms of trade, lump-sum compensation, the absence of externalities, internal mobility of factors and external immobility of factors, to name the most important ones. The failure of one, some or all of these assumptions would allegedly reduce the gains from trade and thus partially invalidate the case for free trade.¹⁴⁷

After having worked out the main differences between the classical and the neoclassical international trade theory, it should be clear now that economists cannot refer to the assumptions of *the* case for free trade as if there were a single and unified economic theory in favor of free trade. There are actually two different cases for free trade: the classical and the neoclassical case. Correspondingly, economists have to differentiate between classical and neoclassical assumptions.

The classical international trade theory merely assumes a certain degree of internal mobility and external immobility of the factors of production.¹⁴⁸ The remaining assumptions mentioned in the above paragraph have all been introduced by the neoclassical theory of international trade. Consequently, the potential failure of these neoclassical assumptions has no consequence whatsoever for the classical case for free trade. Only the eventual failure of the two classical assumptions may have an effect on the proposi-

¹⁴⁷ See, for example, Dunkley (2004, pp. 34ff.).

¹⁴⁸ This fact is even recognized by Dunkley (2004, p. 25), a harsh critic of the unrealistic assumptions of the mainstream case for free trade.

tion that free trade is the most advantageous international trade policy for any country. Thus, let us analyze with more detail the degree of realism of these two classical assumptions, as well as the implications of their expected failure.

Let us start by affirming that if perfect internal mobility and external immobility of the factors of production were considered to be unrealistic assumptions, the same objection should be made for the reverse set of assumptions: absolute internal immobility and perfect external mobility of capital and labor. Starting with the first assumption, it would certainly be a difficult challenge finding an economist which denies the fact that in the real world there is at least a partial internal mobility of the factors of production. Every-day economic life shows that fertile land, buildings and a great part of the industrial machinery can be redeployed to produce other commodities and services. Labor, which should be considered as the most versatile factor of production, generally switches from one industry to the other, sometimes carrying out very different tasks.

The point of dispute among economists is that neoclassical trade models assume that this process of internal redeployment of the factors of production occur instantaneously and at no cost. This is clearly an unrealistic assumption, because some buildings, machineries and tools may indeed have to be written off (sunk costs). For some workers it may be difficult to find new jobs at equivalent pay, and part of their skills — the ones most specialized and directly linked to the previous occupation — may not be required for the new job. These workers may need expensive and prolonged retraining in order to accomplish the new tasks. Based on these reasonable objections, the critics of free trade argue that these costs of redeployment somehow diminish the gains from trade. Following this premise, they claim that it is likely — although not certain — that these redeployment costs may reduce, neutralize or even turn the initial gains from trade into a net loss. At least, they render the benefits of free trade more ambiguous, contingent and subject to a wider range of qualifications than free traders generally admit.¹⁴⁹

The critics are essentially right when labeling perfect — i.e. instantaneous and no-cost — internal mobility of capital and labor as an unrealistic assumption. It is important to recognize, though, that neither Smith nor Ricardo have ever assumed *perfect* internal

¹⁴⁹ See Dunkley (2004, p. 41).

factor mobility. Both classical political economists were aware of the disruptive consequences of an abrupt modification of international trade policies. That is precisely why they invariably recommended a gradual implementation of free trade.¹⁵⁰

Nevertheless, Smith and Ricardo would strongly reject the premise that sunk costs and retraining expenses have to be somehow subtracted from the benefits of free international trade. As one might remember from section 2.2, the main gain from free international trade is that it provides an extension of the market, encouraging the division of labor and the improvement of the domestic productive powers of labor to the utmost. Furthermore, the gains from trade are calculated by applying the classical rule of specialization. According to this rule, it simply does not make any sense from an economic point of view to employ labor and capital in producing commodities and services at home when the country can acquire them from other countries by paying with exports whose production requires less real costs. In other words, whenever the indirect method of production is cheaper than the direct method of production, home-production should be regarded as a waste of valuable human and material resources. Consequently, expected costs of redeployment and restructuring do not diminish the gains from trade in any meaningful way.

The analysis regarding the classical assumption of international immobility of the factors of production also bears very interesting insights. Ricardo introduces this assumption in order to explain why his labor theory of value, which regulates transactions within a country, does not hold for international exchanges. The assumption of a certain degree of international immobility of the factors of production is directly derived from economic reality. It is an undisputed fact that nowadays the labor force cannot move freely from one country to another in order to take advantage of higher real wages. Compared to labor, capital is increasingly more mobile between political borders, but still to a lesser extent than within a country.

The misinterpretation of Ricardo's numerical example has led to a misunderstanding regarding the implications of dropping the international immobility assumption of the factors of production. If in some distant day in the future labor and capital could and

¹⁵⁰ See, for example, Smith (*WN*, IV.ii.44, p. 471).

would move freely throughout the world, the law of value would regulate internal as well as international transactions, and Ricardo's two propositions of the famous numerical example would not be valid any more.¹⁵¹ This outcome, however, would not damage the case for free trade in any meaningful way.

The often-heard fear that in a truly globalized economy — i.e. freedom of movement for labor, capital, commodities and services — the world's population would massively migrate to and concentrate in a few advanced countries is largely unfounded. The economic conditions I am referring to have already been implemented within some member states of the EU, and neither the Portuguese nor the Greeks have migrated in considerable numbers to Germany, France or the Scandinavian countries. Cultural barriers and other factors hinder the concentration of production in a few locations. Specific factors of production — for example fertile land, raw materials and particular climatic conditions — cannot be easily transferred to other geographic locations. Some conditions might be artificially reproduced in other latitudes — for example greenhouses —, but at considerable expenses of resources, capital and labor.

Critics of free trade have correctly pointed out that the neoclassical case for free trade is partially based on unrealistic assumptions. They may also be right when they argue that these assumptions have been made in order to obtain pro free-trade results.¹⁵² What the classical international trade theory shows — and these critics of free trade often omit — is that the same conclusion in favor of free trade can be obtained without having to rely on unrealistic assumptions.

4.2 Increasing Returns to Scale and the Free-Trade Case

4.2.1 The New Trade Theory

The neoclassical international trade theory has brought a great deal of inconsistency and confusion to the theoretical case in favor of free trade. This can be shown best

¹⁵¹ Ricardo himself refers to the implications of dropping the assumption of immobility of the factors of production in the sixth paragraph of the extensive quote in page 53 of this thesis.

¹⁵² See, for example, Hudson (1992, chapter 8).

when taking into account the rather erratic treatment of increasing returns to scale in the neoclassical theory of international trade during the last decades. Until the late 1970s, neoclassical international trade theory had been completely dominated by the assumptions of constant returns to scale and perfect competition. Consequently, the crucial role of increasing returns in explaining the pattern of international trade was relegated to footnote — if not completely omitted — in mainstream international trade theory.¹⁵³

What seems particularly striking is the justification given for the initial exclusion of increasing returns to scale from international trade theory: apparently, they were omitted because it was not possible then to integrate them into general equilibrium models.¹⁵⁴ Except under the implausible hypothesis that increasing returns to scale are completely external to firms, they must lead to imperfect competition. Until the 1970s, though, neoclassical economists did not know how to integrate imperfect competition into general equilibrium models (Krugman, 1987, pp. 132-133).

The 1980s mark the starting point of a *renaissance* of increasing returns to scale and economies of scale in mainstream international trade theory. During that decade increasing returns to scale were brought back to front page of neoclassical international trade theory. This unexpected comeback was the result of specific circumstances both in academic research and economic reality, which set the stage for this renaissance. It is important to refer briefly to these circumstances in order to understand the origin, scope and limitations of this comeback of increasing returns to scale to mainstream neoclassical international trade theory.

Before 1980 international trade was usually modeled assuming constant returns to scale and perfect competition. Under these set of assumptions, international trade could only arise to the extent that countries differ in tastes, technology or factor endowments. Countries were said to specialize and trade with each other in order to take advantage of

¹⁵³ Remembering his days as a graduate student, Krugman (1992, p. 425) states: “*In the 1970s, one could (as I did) study international trade at the graduate level without once hearing a discussion of the role of increasing returns as a cause of trade, or use a leading textbook without once finding a sentence to the effect that economies of scale can lead countries to specialize and trade even in the absence of any differences in tastes, technology, or factor endowments.*”

¹⁵⁴ See Krugman (1981, p. 960).

these differences. Other causes for the international division of labor and specialization, which are in contradiction with the stated assumptions, were ruled out by definition and simply ignored. The logical consequence of this sort of autistic behavior from the part of the majority of neoclassical economists was that mainstream international trade theory could not account for most of the kind of international exchanges that have been taking place since World War II.

Several authors have highlighted the striking divorce of traditional neoclassical trade models from economic reality. Wassily Leontief, for example, pointed out that the United States have been exporting labor-intensive rather than capital-intensive products — the famous Leontief paradox —, contradicting the pattern of trade suggested by the H-O model.¹⁵⁵ Additionally, empirical surveys found out that intra-industry trade accounted for much of the international trade that was taking place, with countries exchanging commodities within narrowly defined product categories. These commodities were mostly differentiated products produced under increasing return to scale, and their manufacture appeared to be carried out under market structures other than the perfect competition assumed by the CULC model and the H-O model.

Unwilling to settle with the striking empirical insufficiencies and contradictions of neoclassical international trade theory, during the late 1970s a group of young scholars started to realize that they had to look beyond mainstream neoclassical trade models in order to find a satisfactory explanation of the actual pattern of international trade, particularly the extensive trade of differentiating products among industrialized countries (Krugman, 1980). Furthermore, they concluded that the neoclassical notion of comparative advantage, which stresses the differences between countries as the single cause for international trade, was not suitable for explaining intra-industry trade, since even economies that are identical in every respect can find it mutually beneficial to trade with each other.

¹⁵⁵ The Leontief Paradox stimulated extensive theoretical and empirical research directed at providing alternative explanations for the commodity-pattern of a country's trade. For an overview see Baldwin (1971).

At the beginnings of the 1980s, this group of young economic scholars published a series of papers in which economies of scale led to arbitrary specialization by nations on products within monopolistically competitive industries.¹⁵⁶ In order to highlight the break with traditional neoclassical trade theory — and also perhaps for self-marketing purposes —, they proposed to name their new insights the *New Trade Theory* (NTT), merging various theoretic models under this unified label. The authors of these papers called themselves the *new trade theorists*.

What is the essence of the NTT? According to Krugman, who has been perhaps the most outspoken new trade theorist, it is the non-comparative advantage trade (Krugman, 1992, p. 424). New trade theorists argue that countries do not necessarily specialize and trade solely in order to take advantage of their differences; they also trade because of increasing returns, which makes specialization advantageous per se. For the new trade theorists, therefore, economies of scale are an independent cause of international trade, logically as the same level as comparative advantage.¹⁵⁷ The basic ideas of the NTT are therefore the emphasis on increasing returns to scale as an important cause for international trade, and the need to model international markets as imperfectly competitive.

The formidable challenge of integrating economies of scale into general equilibrium models was accomplished by using models of imperfect competition that had been originally developed by researchers of industrial organization.¹⁵⁸ On the one hand, these theoretic models offer a high level of mathematical sophistication, satisfying the neo-classical obsession with formal mathematical analysis; on the other hand, they are relatively easy to handle.

Nevertheless, these imperfect competitive trade models could not overcome the main weakness of the traditional models: the lack of economic realism and empirical rele-

¹⁵⁶ See, for example, Paul Krugman (1979, 1980, 1981); Avinash Dixit and Victor Norman (1980); Kevin Lancaster (1980); Elhanan Helpman (1981) and Wilfred Ethier (1982).

¹⁵⁷ See, for example, Krugman (1987, p. 133).

¹⁵⁸ See Michael Spence (1976) and Avinash Dixit and Joseph Stiglitz (1977).

vance.¹⁵⁹ Curiously, despite of their failed attempt to reconcile economic theory with reality, the new trade theorists have been credited for bringing economic analysis a step closer to reality, because their models dispense with the two fundamental assumptions of the neoclassical trade theory: perfect competition and constant returns to scale. Although the problem of empirical relevance persisted, these models of imperfect competition offered a conceptual framework for reintroducing increasing returns to scale into mainstream international trade theory without having to dismiss the notion of general economic equilibrium.

In terms of its intellectual influence among scholars, the NTT has been a highly successful innovation. Its basic insights — in particular, the importance of increasing returns to scale as a fundamental cause of international trade, and the need to model international markets as imperfectly competitive — have quickly moved *from iconoclasm to orthodoxy* (Krugman, 1992, p. 423). A possible explanation for the rapid gains in popularity of the NTT in academic circles can be found in the obvious shortcomings of the traditional neoclassical international trade models, which were very much discredited by the time of the arrival of the NTT. That the arrival of the new models of imperfect competition was accompanied by serious questions regarding their empirical relevance was not seen as an insurmountable handicap in this context, because the traditional neoclassical international trade models had even greater problems in terms of empirical relevancy.

The other relevant factor that contributed to the relatively rapid acceptance of the NTT among scholars has to be found in the public debate about international trade within the United States during the 1980s. From 1945 until the mid 1980s, free trade enjoyed broad popular support both in academics and the public in the United States. This country emerged from World War II as a staunch crusader for liberalization of global trade, notwithstanding occasional lapses from its own stated ideals. For most U.S.

¹⁵⁹ In order to be fair, it is important to recognize that the creators of these models are generally aware of their empirical limitations. As Krugman (1992, p. 426) explicitly recognizes, “(...) *nobody really viewed these models as a plausible description of the real-life-process of competition in oligopolies.*” They are built on assumptions that do not resemble the functioning of any known economic system. See also Krugman (1980, 1981).

companies, neither exports nor competing imports played an important role in overall profitability. If a few industries had grievances about foreign competition, the country as a whole seemed to prosper along with, and because of, the steady expansion of its international trade (McCulloch R. , 1993).

This positive attitude towards free trade changed during the 1980s. With help from a strong dollar in the mid-1980s, foreign companies started to challenge U.S. producers in a widening range of industries. Trading partners with activist policy regimes enjoyed prosperity fueled by export surpluses, while employment and wages sagged in America's own manufacturing sector. The continued growth of U.S. exports was outpaced by the growth of imports. The resulting trade deficits were startling in size and seemingly resistant to the usual remedies. Of still greater concern was the perceived nature of foreign competition. Where lost market share had once been concentrated in mature industries such as apparel and footwear, powerful rivals (some bankrolled by foreign governments) began to contest U.S. dominance even in advanced high-technology sectors (Tyson, 1993). Innovative products, including ones based on U.S. research, seemed as likely to come to the U.S. market from foreign as from domestic producers (McCulloch R. , 1993).

Growing concerns about a perceived decline in US international competitive position and overall economic performance led to increasing public dissatisfaction with the nation's laissez-faire approach to international trade. As a consequence, popular support within the US for free trade policies started to decrease. Some argued that the US was losing its competitive edge with respect to the rest of the world because of its liberal trade policies. The rising skepticism regarding the merits of free trade created new interest in whatever rationale economic theory can provide for trade-policy activism.

At the first look, the NTT does not seem to imply an activist or protectionist trade policy at all. Although the new models of trade challenges the traditional view that all trade represents exploitation of comparative advantage, the NTT does not at first challenge the proposition that trade is of mutual benefit to the trading nations. Indeed, if anything, the introduction of increasing returns and imperfect competition into trade theory strengthens the case that there are gains from trade. In addition to benefiting from complementary differences in resources and technology, trading countries can specialize in the production of different goods, allowing a greater use of economies of

scale while maintaining or increasing the diversity of goods available. Furthermore, by creating larger, more competitive markets, trade may reduce the distortions that would have been associated with imperfect competition in a closed economy. Thus, the initial implication of the new trade theory seemed to strengthen the case for free trade, reinforcing the traditional view that trade is a positive-sum game that is generally carried on to the countries' mutual benefit.¹⁶⁰

Nevertheless, a theory of international trade that takes increasing returns to scale into consideration must also allow for oligopoly, external economies, or both. The NTT indeed suggests that in the real world many traded commodities are produced by industries that are both oligopolistic and subject to external economies. Either necessarily implies a failure of the usual conditions for optimality of laissez-faire: if economies of scale are internal to firms, there must be an oligopoly in which price exceeds marginal cost; if the economies of scale are somehow purely external to firms, and perfect competition is thus preserved, social marginal cost is less than private (Krugman & Smith, 1994, p. 2). *"Once one has abandoned the assumptions of constant returns and perfect competition",* Krugman (1993, p. 363) states, *"one has also abandoned the Arrow-Debreu world in which markets necessarily produce a Pareto optimum. Therefore, the NTT not only legitimized imperfect competition in positive discussion of trade, but also opened the door to possible arguments for government intervention."* Thus instead of the traditional picture that free national and international markets lead to a Pareto optimum, the NTT offers a new picture in which markets normally lead to suboptimal results. Furthermore, in arguing that trade is driven to an important extent by increasing returns rather than comparative advantage, the new trade theorists also inevitably introduced some arbitrariness into the pattern of international specialization: in the new view, who produces what is the result of history, accident and past government policies rather than underlying differences in national resources and aptitudes (Krugman, 1992, p. 425).

It was merely a matter of time, therefore, when some scholars would figure out how to make a case for protection out of the new theoretic framework created by the NTT. Indeed, the view emphasized by the NTT that international trade is driven to an im-

¹⁶⁰ See Krugman (1987, pp. 133-134) and Krugman & Smith (1994, p. 1).

portant degree by economies of scale in a context of imperfect competition has suggested two arguments against free trade, which will be analyzed in the following section.

4.2.2 Two Neoclassical Arguments against Free Trade

4.2.2.1 Strategic Trade Policy

The antecedents of the strategic trade policy argument are to be found in research results in the field of industrial organization, where scholars studied the competitive behavior of firms in oligopolistic industries.¹⁶¹ International trade economists later transplanted these insights into a context that seemed relevant to international trade theory. James Brander and Barbara Spencer, in particular, suggested in two influential papers (1983; 1985) that government policies such as export subsidies and import restrictions may deter, under the right circumstances, foreign companies from competing for lucrative markets. In this context, government trade policy serves much the same role that strategic moves such as investments in excess capacity or in research and development serve in many models of oligopolistic competition — hence the term *strategic trade policy* (Krugman, 1987, p. 134).

The strategic-trade-policy argument is built upon the rather uncontroversial observation that in industries characterized by increasing returns to scale and imperfect competition some companies may consistently earn profits above the natural rate. From this undisputed fact, Brander and Spencer have derived the new proposition that a country may raise its national income at other countries' expense if it can somehow ensure that the companies earning monopolistic profits are domestic rather than foreign.

The above proposition can be briefly explained with the following example: imagine two companies from different countries competing for some lucrative export market. Furthermore, suppose that economies of scale are sufficiently large in this particular industry that there is only room for one profitable entrant in the world market as a whole; that is, if two firms were to enter they would both incur in losses. Then whichever

¹⁶¹ For an overview of strategic trade policy, see Krugman (1986).

er firm manages to establish itself in the industry will earn monopolistic profits that will not be competed away. The respective domestic consumers are ignored or assumed away by supposing that there is no domestic demand for the commodity exported, so that the monopolistic profits of the successful company can be identified with the national interest of the home country. In this sort of competitive situation, each company would like the other to believe that it will invest or produce massively, thereby inducing the other to produce or invest less, or even deter the other of entering the market in the first place. The challenge is to find a way to make the threat of such an aggressive competitive behavior credible. Suppose that one company can commit its national government to subsidize the firm's operations. Such a move would most likely convince the competing foreign company that the threat of aggressive competitive behavior is credible, prompting it to curtail its own investment plans. The result can be to raise the firm's profits by much more than the actual subsidy outlay. As a result, such a strategic trade policy is said to raise the aggressive country's national income at the other country's expense.¹⁶²

Brander and Spencer focus on possible subsidization of cost-reducing R & D such as, for example, the Japanese and French subsidization of robotics in automobile assembly.¹⁶³ R & D is assumed to be undertaken before the associated output is produced, with firms anticipating the effect of R & D on the resolution of output shares. Thus R & D serves as a commitment or credible threat, along the lines considered in Spence (1977; 1979), Dixit (1980) and Eaton & Lipsey (1980). In contrast to these papers, however, where an established firm acts first, Brander and Spencer use a theoretic model where firms have equal opportunity in setting R & D levels. The efficacy of government

¹⁶² A similar example can be found in Krugman (1987, pp. 134-136). Both examples, however, recreate a very unlikely scenario, because if only two companies dominate an entire industry worldwide, they both will probably earn monopolistic profits. The losers of such a state of affair will inevitably be the consumers in every country.

¹⁶³ They also consider the case of export subsidies, concluding that with export subsidies available, countries would not choose to subsidize R & D. Nevertheless, because GATT codes effectively restrict direct export subsidies, they consider the setting in which only R & D subsidies are available as the most relevant case. See Brander & Spencer (1983, p. 707).

policy arises from the assumption that a government can credibly commit itself to R & D subsidies before private firms made their R & D investment decisions.

According to the supporters of the strategic trade policy argument, the principal aim of international trade policy appears to be to increase a country's share in the worldwide production of imperfectly competitive — and therefore monopolistic profit earning — industries operating in international markets. A similar aim is proclaimed by other arguments for protection, like the monopoly tariff argument (Johnson, 1953-1954), the use of export taxes and encouragement of export cartels to exploit the monopoly power of domestic firms (Auquier & Caves, 1979), or the use of tariffs to extract rent from foreign imperfectly competitive firms (Brander & Spencer, 1981).

4.2.2.2 External Economies

The second neoclassical argument for protection originated by the NTT is built around the notion of external economies. Alfred Marshall relied heavily on the notion of external economies for explaining the phenomenon of *industrial districts*, i.e., the geographical concentration of industries that could not be attributed to the existence of natural resources (Marshall A. , 1920). Nowadays, these geographical agglomerations of industries are often called *clusters*.¹⁶⁴ Famous modern-day examples of clusters are the semiconductor industry in California's Silicon Valley; the financial clusters in New York and London; the entertainment industry in Hollywood and Mumbai; and the IT-industry in Bangalore, India.

Marshall mentions several reasons why a cluster of firms may be more productive than an individual firm in isolation; for example, the ability of a cluster to support specialized suppliers; the way that a geographically concentrated industry allows labor market pooling; and the way that a geographically concentrated industry helps foster knowledge spillovers. All these reasons may continuously reinforce a certain pattern of international trade, which initially had merely been the result of a historical accident.

¹⁶⁴ The term cluster appears to have been popularized by Michael Porter in *The Competitive Advantage of Nations* (1990). Interestingly, the title of Porter's book is a hint to his fictitious contraposition of comparative and competitive advantage, which is a direct consequence of using the neoclassical notion of comparative advantage. See Porter (1990, p. 11).

Before the arrival of the NTT, the ideas that external economies were important, and that the promotion of industries with considerable external economies might be an important goal of international trade policy, were remarkably unpopular among international trade theorists (Krugman, 1992, p. 435). Since general economic equilibrium models used to assume perfect competition and constant returns to scale, the only external economies that could be conceived were pure technological spillovers. Empirically, however, the most plausible source of positive external economies is the inability of innovative firms to fully appropriate the knowledge they create. The presence of problems of appropriability is unmistakable in industries experiencing rapid technological progress, where firms routinely take each other's products apart to see how they work and how they were made. In traditional international trade models with their reliance on perfect competition, however, external economies resulting from incomplete appropriability could not be explicitly recognized, because a firm's investment in knowledge creation and innovation that is the source of the spillover could not be fitted in. These investments inevitably have a significant fixed-cost component; once a firm has improved its product or production technique, the unit cost of that improvement falls as a greater amount of commodities is produced. The result of these dynamic economies of scale must be a breakdown of perfect competition. As a result, perfectly competitive models could not explicitly recognize the most plausible reason for the existence of external economies (Krugman, 1987, p. 137).

Moreover, people working for different companies can certainly learn from each other, but this rather undisputed fact is not particularly relevant for international trade theory, unless this learning process somehow stops at the country border. The best candidates for nationally limited external economies are where knowledge spreads largely by personal contact and word of mouth, which is a much more restricted set of activities than R & D in general.

The most important international trade policy implication of the NTT is that it revokes these restrictions formerly associated with external economies, legitimizing the importance of external economies for international trade. According to the NTT, what matters for international competition are broadly defined external economies, including market-size effects as well as pure technological spillovers (Krugman, 1992, p. 436).

Like the strategic trade policy argument, external economies seem to offer a reasonable justification for a neo-mercantilist view of international trade. According to Krugman (1992, p. 436), it seems quite plausible that a country that systematically tries to promote industries subject to significant external economies will raise its standard of living at the expense of other countries.

The external economies argument, however, differs in one important aspect from the strategic trade policy argument: policies to promote sectors yielding substantial external economies do not necessarily need to affect other countries adversely. Whether the effect of one country's targeting of high-externality sectors on other countries is positive or negative depends on whether the scope of the externalities is national or international. The conflict of national interests is limited to the case when knowledge spills over within a country but not between countries.¹⁶⁵

4.2.3 A Political Restatement of the Free Trade Case after the NTT

As already been said, the NTT has been a success story in terms of reception and acceptance in the academic playing field. The new international trade models, featuring imperfect competition and increasing returns to scale, have partially eclipsed the traditional constant-returns-to-scale and perfect-competitive models of mainstream neoclassical international trade theory. This rather significant overhaul of mainstream international trade theory, though, has had few implications on the practical recommendations about international trade policy. A majority of professional economists, including many new trade theorists, have maintained their recommendation in favor of free trade.¹⁶⁶

This lack of consequence in the field of international trade policy has disappointed and angered those economists who had hoped the NTT could be turned into a new

¹⁶⁵ Krugman (1987, p. 138) states in a footnote: *"Finally, if economies of scale (internal and external) are large enough, conflict of interest becomes unavoidable. Suppose there is room for only one Silicon Valley in the world, yet the agglomeration will yield valuable external economies to the country that gets it. Then the conflict cannot be avoided except through side payments."*

¹⁶⁶ According to Krugman (1993, p. 365) it is perfectly possible to be both a new trade theorist and a free trader.

framework of international trade capable of offering a solid theoretical support for interventionist trade policies. These economists have launched stringent accusations towards the new trade theorists, accusing them of inconsequence and collective cowardice.¹⁶⁷ So why hasn't the NTT led to a new international trade policy? New trade theorists have come up with different explanations for their collective trade policy reticence. Krugman, for example, recurs at some point to the neoclassical dichotomy between positive and normative economics, arguing that the NTT is primarily a positive rather than a normative economic theory, and therefore not meant to be policy-oriented at all. The majority of the new trade theorists — including himself — were motivated by an effort to explain the pattern of trade, and to fill a logical gap in traditional international trade theory, rather than by the desire to find a justification for neo-mercantilist trade policies (Krugman, 1992, p. 424).

The above explanation, though, is not particularly convincing. As already pointed out earlier in the thesis¹⁶⁸, the alleged dichotomy between positive and normative economics — a characteristic feature of the neoclassical school of economic thought —, is a convenient and often heard excuse for the growing inability of neoclassical theories to offer an accurate and consistent description of the real functioning of the economy, and to derive concrete economic policies from it. Moreover, it is also an attempt to create a false aura of objectivity and impartiality around an economic theory with very concrete distributional preferences and consequences.

In order to offer a more solid explanation for their pro-free-trade position, some new trade theorists, including Krugman, have critically examined the two neoclassical arguments against free trade, discovering important weak points. Particularly the strategic trade policy argument has been subject to a detailed academic critique. Eaton & Grossman (1986) showed that the case for strategic trade policy is sensitive to the assumed form of competition; Horstmann & Markusen (1986) demonstrated that the benefits of strategic trade policy might be dissipated by entry of new firms and the resulting excess capacity; Dixit & Grossman (1986) showed that competition for scarce resources among

¹⁶⁷ See, for example, Kuttner (1991).

¹⁶⁸ See section 1.3.

industries complicates greatly the task of devising a welfare-improving policy; and Dixit & Kyle (1985) argued that strategic trade policy should be seen as part of a larger game in which it would often be better for governments to rule out their possibility. It also appears that the assumptions made in the Brander-Spencer model lack robustness: small changes in the assumptions can easily undermine or even reverse the results (Krugman, 1992, p. 433).¹⁶⁹

According to Krugman, the above objections do not prove the strategic trade policy argument wrong, but highlight the fact that the case for trade intervention based on this argument is highly sensitive to details of market structure that governments are unlikely to get right. Furthermore, efforts to quantify the potential gains from monopolistic rent snatching suggest small payoffs.¹⁷⁰ Free trade may not be the optimal policy, these studies suggest, but sophisticated interventionist policies will do only a little better (Krugman, 1993, p. 363).

External economies, on the other hand, seem to be a plausible argument against free trade as long as they remain an abstract academic concept. When trying to confront the external economies argument with the real world, however, one would rapidly encounter difficult empirical challenges. External economies, for example, are particularly difficult to quantify, and one industry seems as likely as any other to generate significant external economies.

As a consequence of the above-mentioned problems, the supporters of strategic trade policy and external economies arguments have encountered severe obstacles when trying to make their trade policy proposals operational. So far, they have not even been able to clearly identify the highly desired industries (Krugman, 1992, p. 439). If a practical-minded politician, after being convinced by some economists that national firms in certain strategic sectors are entitled to receive subsidies, would ask these economists which sectors should be subsidized, he or she may receive the following answers: high

¹⁶⁹ Eaton and Grossman (1986), for example, showed that the implausible assumption of Cournot competition was crucial to the result; if firms compete in prices instead of quantities, the optimal policy is an export tax.

¹⁷⁰ For surveys of this literature, see Helpman & Krugman (2002) and Krugman & Smith (1994).

technology and high investment industries (Brander & Spencer, 1983, p. 717); industries where R & D is an especially large part of firm's cost (Krugman, 1987, p. 137); or industries with a high value added. These vague and rather ambiguous answers are far from being operationally useful.¹⁷¹

Unable to solve the multiple theoretical and empirical challenges mentioned above, the new trade theorists have opted for the following compromise: While conceding that the two neoclassical arguments against free trade are valid in principle, they nevertheless recommend to maintain a free trade policy because the potential benefits of promoting strategic sectors or industries with important external economies appear to be relatively small¹⁷², and the practical implementation of interventionist trade policies may bear considerable political risks.¹⁷³

Interventionist trade policies as the ones suggested by the NTT are indeed very likely to generate considerable political problems at the national as well as international level, which can revert any theoretical benefit. Regarding the national level, when a proposed economic policy change is expected to raise the income of small privileged groups while spreading the considerable costs on a large amount of people, the political process of formulating and implementing economic policy usually comes to be dominated by considerations regarding distribution rather than efficiency. An effort to promote strategic sectors, for example, could be easily taken over by special interests and molded according to their economic interests, because they are usually far better informed than those who have to bear the costs. As a result, the initial effort to promote *strategic* sectors may end up as an inefficient redistributive program. Although governments never fail to promote their economic policies as a patriotic imperative, particularly those with respect to international trade, they are not necessarily guided by the general interest of the population, but more often by the particular interests of powerful interest groups.

¹⁷¹ This fact is recognized by Krugman (1987, p. 137).

¹⁷² Without resolving the problem regarding empirical measurability, several researchers have nevertheless suggested that the potential gains from deviating from free trade are very small at best. See, for example, Cox & Harris (1985) and Feenstra (1988).

¹⁷³ See Krugman (1987; 1993).

How can the problem of interest-group influence on decision-making be resolved in the real world? To ask the political decision-makers to ignore special-interest politics while formulating industrial policy is not realistic; to establish a blanket policy of free trade, with exceptions granted only under severe scrutiny, may not be the optimal policy according to the theory but may be the best policy that the country is likely to get (Krugman, 1987, p. 141ff.).

Moreover, a successful implementation of a strategic trade policy, shifting profits in oligopolistic industries towards national companies, presupposes that foreign governments do not retaliate. The unilateral use of export subsidies or import tariffs in oligopolistic industries to gain a competitive edge is, however, very likely to invite retaliation from aggrieved trading partners. Such retaliation is even more likely in precisely the knowledge-intensive high-technology industries, since these industries are widely regarded as important in themselves. Locating them behind one's own borders is often seen as a matter of securing broader political and economic benefits. Intervention by foreign governments, regardless of whether profit-shifting-related advantages exist or not, is generally seen, therefore, as an attempt to get a larger share of this important pie than is warranted by legitimate market forces.

The expected retaliation may trigger mutually harmful trade wars. In many cases, though, a trade war between two interventionist governments will leave both countries worse off than if both had adopted a hands-off approach. The way to avoid this negative result is to establish rules of the game that keep mutually harmful actions to a minimum. If such rules are to work in the practice, however, they must be simple enough to be clearly defined. Free trade is such a simple rule; it is easy enough to determine whether a country imposes tariffs or import quotas.

As a result of the above-mentioned objections to strategic trade policy and the external economies argument, neither of them has managed to overthrow the case for free trade. Nevertheless, they have created a climate of doubt about the economic merits of free trade. As a consequence, the case in favor of free trade has turned more political

than economic.¹⁷⁴ What the supporters and critics often miss to point out, though, is that the adduced theoretical validity of the two neoclassical arguments against free trade is actually limited to the general economic equilibrium framework¹⁷⁵, and that the uncertainty with regard to the empirical relevance of the two arguments is the unavoidable consequence of the fact that they are the product of this defective and intrinsically contradictory theoretic framework.

4.2.4 A Classical Critique of the New Trade Theory

Some new trade theorists, most notably Krugman, like to portray the main insights and propositions of the NTT as a novel and revolutionary contribution to international trade theory.¹⁷⁶ With respect to the role of increasing returns to scale as an important cause of international trade, though, they had to recognize somehow reluctantly that Ohlin had already highlighted it back in 1933.¹⁷⁷ So what is exactly *new* and *revolutionary* with regard to the *New* Trade Theory? The short answer is: very little, if anything.

The new trade theorists can legitimately claim achievement for reintroducing increasing returns to scale into mainstream neoclassical international trade theory. Increasing returns to scale, while acknowledged in principle, could not be formally built-in into traditional neoclassical trade models until the NTT came along due to the presence of the constant-cost assumption. An innovative modeling technique allowed the new trade theorists to drop this assumption. Thus, the NTT is essentially a *new modeling approach*

¹⁷⁴ In one of several papers on the subject, Krugman (1987, p. 132) states that “(...) *free trade is not passé, but it is an idea that has irretrievably lost its innocence. Its status has shifted from optimum to reasonable rule of thumb. There is still a case for free trade as a good policy, and as a useful target in the practical world of politics, but it can never again be asserted as the policy that economic theory tells us is always right.*”

¹⁷⁵ Krugman recognizes the close relationship between the two neoclassical arguments against free trade and the general economic equilibrium paradigm when affirming that “(...) *the view that free trade is best of all possible policies is part of the general case for laissez-faire in a market economy, and rests on the proposition that markets are efficient. If increasing returns and imperfect competition are necessary parts of the explanation of international trade, however, we are living in a second-best world where government intervention can in principle improve on market outcomes*” (Krugman, 1987, p. 134).

¹⁷⁶ See Krugman (2009).

¹⁷⁷ See Krugman (2002).

(McCulloch R. , 1993) of international trade within the neoclassical general economic equilibrium paradigm.

The new trade theorists regard the general economic equilibrium paradigm as a synonym for theoretic rigor, despite the fact that increasing returns to scale had been initially omitted from mainstream neoclassical models of international trade because they were incompatible with the constant-returns-to-scale and perfect-competition assumptions of this paradigm. Krugman unambiguously acknowledges this reason for initially excluding increasing returns to scale when affirming that “(...) *unexhausted economies of scale at the firm level necessarily imply imperfect competition, and there were no readily usable models of imperfect competition to hand. Even more to the point, there were no general equilibrium models of imperfect competition readily to hand — and trade theory, perhaps more than any other applied field of economics, is built around general equilibrium analysis*” (Krugman, 2009, p. 563).

The incorporation of imperfect competition into general economic equilibrium models of international trade was achieved by following the neoclassical practice of making unrealistic assumptions. The new trade theorists generally acknowledge the unrealistic nature of international trade models featuring imperfect competition, as can be seen in the following quote from Krugman:

“The new trade theory, instead, focused on strongly special, even silly-seeming cases. (“Dare to be silly” became one of my principles for research.) There is no good reason to believe that the assumptions of the Dixit-Stiglitz model — a continuum of goods that enter symmetrically into demand, with the same cost functions, and with the elasticity of substitution between any two goods both constant and the same for any pair you choose — are remotely true in reality. The assumptions are instead chosen, with full self-consciousness, to produce a tractable example that contains what older trade theories left out — namely, the possibility for intraindustry specialization due to economies of scale” (Krugman, 2009, p. 566).¹⁷⁸

The new trade theorists could openly recognize the unrealistic nature of the new international trade models featuring imperfect competition without seriously jeopardizing the validity and general acceptance of these models, because the use of unrealistic assumptions is an extended and validated practice throughout the neoclassical school of

¹⁷⁸ A similar statement can be found in Krugman (1992, p. 426): “During the 1970s theorists in the industrial organization area, above all Dixit and Stiglitz (1977), developed a set of consistent yet easy-to-use models of imperfect competition. Nobody really viewed these models as plausible descriptions of the real-life process of competition in oligopolies.”

economic thought. Therefore, they knew that more traditional-minded neoclassical trade theorists could not seriously challenge them on this point. After all, if the deployment of unrealistic assumptions has been already accepted in principle, it is very easy to end up with an *anything-goes-approach*, since there is no scientific parameter for discriminating against specific unrealistic assumptions while accepting others.

Classical economists, however, can effectively criticize the unrealistic assumptions of the NTT, since they are not bound to the practice of making these assumptions to produce desirable results. Moreover, they should also reject the assertion made in the above quote that preceding international trade theories had left out the possibility for intraindustry specialization due to economies of scale by referring to Adam Smith and the *Wealth of Nations*.

Smith has to be seen as the legitimate intellectual forefather of the NTT — and also the *New Growth Theory* for that matter — in light of his insistence that an economy's productivity depends primarily on the development of the division of labor, which itself is limited by the extent of the market, including a country's export markets. Smith's analysis of the division of labor also includes what has been later labeled as internal and external economies of scale.¹⁷⁹

Besides ignoring the fact that considerations regarding large-scale production and technological innovations were already at the center of Smith's analysis on the benefits of international trade, the new trade theorists have also misinterpreted Ricardo's comparative advantage insight. Krugman likes to define comparative advantage as “(...) *the idea that countries trade to take advantage of their differences*” (Krugman, 2009, p. 561). This is of course the neoclassical notion of comparative advantage, which is the result of the misinterpretation of Ricardo's numerical example. According to Smith and Ricardo, there are plenty of sources — both natural and artificial — for comparative advantage, including economies of scale and increases returns to scale.¹⁸⁰ Consequently, they should

¹⁷⁹ See also Kibritçioğlu (2002).

¹⁸⁰ See section 2.5.

not be considered as non-comparative-advantage sources of international specialization.¹⁸¹

Due to this misunderstanding, the new trade theorists put economies of scale, formerly viewed by Ohlin as an important but secondary cause for international trade, on an equal footing with respect to comparative advantage. Increasing returns to scale are portrayed in the NTT as an independent cause for international trade. Facing the obvious contradiction of having two unrelated and mutually-exclusive explanations for international trade, the new trade theorists found an ingenious way-out of this dilemma. The compromise consists in referring to the Heckscher-Ohlin-Samuelson theory to explain inter-industry trade; the intra-industry trade, the result of specialization within industries, however, is now supposed to be driven by increasing returns to scale (Krugman, 1992, p. 427). Thus, the NTT fails to integrate economies of scale into a broader explanation of comparative advantage, as was already accomplished by classical political economists nearly two centuries ago.

Moreover, the continued reliance of the NTT on the general economic equilibrium paradigm has transformed the insight regarding the benefits of large-scale production into a potential argument for government intervention and protectionism. This is in sharp contrast to the treatment of large-scale production in classical political economy, where it is regarded as an important cause for increases in labor productivity, and therefore a crucial argument in favor of free trade.

Classical political economy also provides a solid theoretical framework for seriously challenging the validity of the neoclassical notion of strategic trade policy as well as the external economies argument. These two neoclassical arguments against free trade hinge crucially on the idea that some industries are intrinsically more desirable than others, and that a country would devote inadequate resources to these industries without an explicit government policy in their favor. The focus of the critique of these two arguments has to be on the use of alternate and questionable benchmarks for assessing the desirability of certain industries.

¹⁸¹ For the opposite view, see Krugman (1993, p. 363).

The NTT labels an industry as *strategic* first and foremost if the companies involved are able to achieve monopoly profits. According to classical political economy, though, profits above the natural — or average — rate are always an indication for a low level of competition within a particular industry, because monopoly profits are supposed to be competed away by established competitors or new participants in the marketplace. The government should thus encourage competition rather than granting protection whenever an industry is achieving monopoly profits, because the resulting lower commodity prices — not high firm profits — are in the best interest of the consumers.

Furthermore, all industries are theoretically feasible of achieving high profit rates or important external economies, so neither of these benchmarks should be taken as a valid indicator for the desirability of a particular industry. Moreover, external economies generated by incomplete appropriability of the results of R & D undoubtedly constitute a competitive threat for an individual firm, because it prevents the firm from capturing the monopoly profits from innovations, but it should not be seen as a significant threat for the economy as a whole. National as well as foreign consumers rather profit from incomplete private appropriability of the results of R & D, because they can buy innovative products without having to pay the premium price.

Furthermore, it seems a questionable practice to use public funds to subsidize R & D efforts of private companies, if — as usual — the resulting innovations remain the exclusive intellectual property of the private company. In this case, the consumer has to pay twice in order to benefit from the public-funded innovations: first in the form of taxes in order to finance the subsidy, and second in the form of premium prices when buying the innovative products. This does not imply of course that governments should abstain from investing in R & D, but merely that the subsidized research project should be of public interest, and the research results should be made generally available.

A valid formulation of the strategic trade policy argument can be found in the *Wealth of Nations*, when Smith refers to the necessity of granting protection to national industries which are important for the defense of the country. Although he does not use the term “strategic” to denominate these industries, Smith’s analysis perfectly fits to the

military origin of this term. In Smith's time the defense of Britain depended very much upon the number of its sailors and ships. For that reason, Smith endorsed the *Act of Navigation*.¹⁸² It is important to highlight that in this case the assessment of the strategic nature of certain industries is based on considerations of national defense, and not on an economic analysis. Smith is well aware that this justified exception from free trade comes at the price of diminishing the growth of opulence (*WN*, IV.ii.30, p. 464).

In summary, a classical economist should reject the claim made by some new trade theorists that the present-day case for free trade rests primarily on political — not economic — considerations. This claim may be accurate with respect to the neoclassical international trade theory, but certainly not with respect to the classical school of economic thought. Classical international trade theory continues to offer a systematic and solid economic analysis regarding the benefits of free trade.

4.3 The Infant-Industry Argument

*No nation was ever ruined by trade,
even seemingly the most disadvantageous.*

Benjamin Franklin

4.3.1 The Renaissance of an Old Argument for Protection

The infant industry argument — i.e. the claim for granting protection to new industries that are not initially capable of competing with foreign competitors, but with the accumulation of production experience could grow to compete successfully in world markets —, is perhaps the oldest and longest-lived specific argument for protection. Statements in favor of infant industry protection already arise in the mercantilist period, where several writers claimed it was necessary for the promotion of domestic employment and industry.¹⁸³

¹⁸² Smith states: “*As defense, however, is of much more importance than opulence, the act of navigation is, perhaps, the wisest of all the commercial regulations of England*” (*WN*, IV.ii.30, pp. 464–465).

¹⁸³ For examples of early enunciations of the infant industry argument, see Viner (1937, pp. 71–72) and Irwin (1998, pp. 116–118).

In recent years, the infant industry argument has experienced a certain renaissance, particularly among those scholars dedicated to the field of development economics. In the present context of accelerated economic globalization some economists have proclaimed the ever-greater relevancy of infant-industry protection for developing countries at earlier stages of industrialization.¹⁸⁴

The recent revival of this ancient argument for protection seems to be fueled by the NTT's reintroduction of increasing returns to scale into neoclassical international trade theory. Before the NTT, increasing returns to scale already played a prominent role in the formulation of the infant-industry argument. However, it was confined to the cases in which a backward country needed to build up its industrial base to a level that could compete with more developed economies. The NTT suggests that developed countries need to protect some of their infant industries too.

Despite of the alleged incremental need for infant industry protection by developing countries in particular, some scholars complain that the current international trade rules have banned or severely restricted the use of this instrument for industrial development.¹⁸⁵ Therefore, they propose a revision of these international trade rules, which they consider to be unfair and biased against the developing countries. They also claim for a new international trade system, in which the differential situations of countries at various stages of economic development are taken into account. Under this new international trade system developing countries should be allowed to protect their infant industries.

In the light of the restatement of the classical case for free, let us analyze the historical origin and logical structure of the infant industry argument in order to assess if developing countries really need to protect infant industries for achieving economic development.

¹⁸⁴ See, for example, Shafaeddin (2000) and Chang (2002).

¹⁸⁵ See, for example, Chang (2002).

4.3.2 List's Case for Infant-Industry Protection

The contemporary case for infant industry protection is largely based on the writings of nineteenth century German journalist Friedrich List, particularly on his magnum opus *The National System of Political Economy*.¹⁸⁶ This book has attained a similar status within protectionist circles as the *Wealth of Nations* among free traders. In *The National System*, List recommends infant-industry protection as a catch-up strategy for Germany and the United States with respect to Britain, the birthplace of the industrial revolution and most advanced country of the time.

Despite the relevance of List and his infant industry argument for the history of economic thought, Shafaeddin (2000) complains that he is often misinterpreted or completely ignored by contemporary economists and historians of economic thought. The contemporary literature often regards “(...) *the debate on infant industry protection as one against free trade, or even against international trade; perceives infant industry protection as synonymous with import substitution; conceives import substitution as a permanent feature or strategy versus export orientation strategy (...); restricts the infant industry argument to the stage of production for the domestic market; and envisages that protection should be applied across-the-board to the manufacturing sector as a whole, rather than on a selective basis*” (Shafaeddin (2000, p. 3). According to Shafaedin, though, List advocated merely for temporary, selective and not excessive protection, and even supported free trade among countries with the same level of economic development. Given the sharp contrast between these opposing receptions of List, it seems necessary to consult his original writings for clarification.

List states in the *National System* that all nations have to pass through five development stages in their long journey towards economic progress: (1) the savage stage; (2) the pastoral stage; (3) the agricultural stage; (4) the agricultural and manufacturing stage; and (5) the agricultural-manufacturing-commercial stage. In order to progress, countries ought to industrialize, i.e. transit from stage (3) to stages (4) and (5). List believes that

¹⁸⁶ List's first book, *Outlines of American Political Economy*, was a collection of articles which had been published in American journals and newspapers, whereas his second book, *The Natural System of Political Economy*, was written in haste for the purpose of participating in a prize competition in France, and its ideas are not always well exposed. See Henderson (1983).

such a transition cannot take place automatically through the natural course of things, because countries at stage (3) or (4) cannot compete successfully in manufactures with countries at higher stages of industrialization and economic development. If they want to reach the agricultural-manufacturing-commercial stage (5), these catching-up countries need to protect their infant industries from foreign competition in order to develop their national productive powers.¹⁸⁷

Based on numerous and extensive historical examples, List draws the conclusion that the best commercial policy for a specific country is always dependent on its particular stage of economic development:

“Finally, history teaches us how nations which have been endowed by Nature with all resources which are requisite for the attainment of the highest grade of wealth and power, may and must (...) modify their (commercial) systems according to the measure of their own progress: in the first stage, adopting free trade with more advanced nations as a means of raising themselves from a state of barbarism, and of making advances in agriculture; in the second stage, promoting the growth of manufactures, fisheries, navigation, and foreign trade by means of commercial restrictions; and in the last stage, after reaching the highest degree of wealth and power, by gradually reverting to the principle of free trade and of unrestricted competition in the home as well as in foreign markets, that so their agriculturists, manufacturers, and merchants may be preserved from indolence, and stimulated to retain the supremacy which they have acquired. In the first stage, we see Spain, Portugal, and the Kingdom of Naples; in the second, Germany and the United States of North America; France apparently stands close upon the boundary line of the last stage; but Great Britain alone at the present time has actually reached it” (List, 1909, p. 93).

In List’s opinion, a developing country at an earlier stage of economic development characterized by a backward agriculture should not protect its industries. On the contrary, it should pursue free trade, both for the material gains and for the educational gains from contact with the more advanced countries. It is only after the country has attained a certain level of general economic development, including a thoroughly developed agriculture, that it should start giving protection to the main branches of its incipient manufacturing industry, which would promote the increase of the mental and material capital, the technical abilities and the spirit of enterprise of the nation. After arriving to the final stage of the development ladder, the former underdeveloped country should

¹⁸⁷ See List (1909, pp. 143-144).

embrace again the free-trade principle.¹⁸⁸ But even then, List introduces an important political prerequisite: *“If (...) we assume a universal union or confederation of all nations as the guarantee for an everlasting peace, the principle of international free trade seems to be perfectly justified”* (List, 1909, p. 100).

In chapter XII of *The National System* List introduces his *Theory of the Powers of Production*. After making a distinction between wealth and the causes of wealth, he affirms that *“the power of producing wealth is therefore infinitely more important than wealth itself; it insures not only the possession and the increase of what has been gained, but also the replacement of what has been lost”* (List, 1909, p. 108). Therefore, the prosperity of a nation is not (...) *greater in the proportion in which it has amassed more wealth (i.e. values of exchange), but in the proportion in which it has more developed its powers of production* (List, 1909, p. 117).

The sources of productive power are quite diverse and include, according to List (1909, p. 113), the Christian religion, monogamy, abolition of slavery and of vassalage, hereditability of the throne, invention of printing, of the press, of the postal system, of money, weights and measures, of the calendar, of watches, of police, the introduction of the principle of freehold property, of means of transport, among others.

List believes that a country cannot cultivate these sources of powers of production within its national borders without a strong manufacturing sector, and that this sector cannot prosper if the country commerce freely with more developed economies. The objective of developing the national powers of production perfectly justifies the initial costs of infant industry protection.¹⁸⁹ He is convinced that these initial costs will be compensated by future benefits from establishing domestic manufactures.¹⁹⁰

¹⁸⁸ See List (1909, pp. 144-145).

¹⁸⁹ List states: *“The foreign trade of a nation must not be estimated in the way in which individual merchants judge it, solely and only according to the theory of values (i.e. by regarding merely the gain at any particular moment of some material advantage); the nation is bound to keep steadily in view all these conditions on which its present and future existence, prosperity, and power depend”* (List, 1909, p. 117).

¹⁹⁰ List states: *“The nation must sacrifice and give up a measure of material property in order to gain culture, skill, and powers of united production; it must sacrifice some present advantages in order to insure to itself future ones. It is true that protective duties at first increase the price of manufactured goods; but it is just as true (...) that in the course of time, by the nation being enabled to build up a completely developed manufacturing power of its own, those goods are produced more cheaply at home than the price at which they can be imported from foreign parts. If, therefore, a sacrifice of value is caused by protective duties, it is made good by the gain of a power of*

Notwithstanding the potential benefits, List makes several qualifications for the implementation of infant-industry protection. Besides limiting the use of infant-industry protection to a certain stage of economic development, he also believes that protection should be temporary, i.e. confined to the infant stage of an industry, and that it should be gradually removed as the industry matures. Moreover, List considers that the use of protective measures should be confined to the manufacturing sector¹⁹¹; agriculture and raw materials should never be protected.¹⁹²

List's contemporary supporters usually bring up the above-mentioned qualifications, particularly the selective and temporal nature of his claim for protection, in order to defend him from being portrayed as a far-fetched supporter of protectionism.¹⁹³ If the domestic industry could never survive without protection, List would have regarded protection as unwisely granted.

What these supporters often miss to mention is that List is willing to wait a long period of time before allowing protection to expire, calling it *"ridiculous to allow a nation merely a few years for the task of bringing to perfection one great branch of national industry"* (List, 1909, p. 256). In the practical world, however, granting protection for a prolonged period of time factually equals to unlimited protection. Even so, Graham (1923, p. 202) accuses him of making the error of conceding too much to his opponents on this point. Besides this, List's supporters also downplay the fact that he does not advance any specific crite-

production, which not only secures to the nation an infinitely greater amount of material goods, but also independence in case of war (...). A nation capable of developing a manufacturing power, if it makes use of the system of protection, thus acts quite the same spirit as that landed proprietor did who by the sacrifice of some material wealth allowed some of his children to learn a productive trade" (1909, pp. 117-118).

¹⁹¹ In List's words: *"(...) the system of protection can be justified solely and only for the purpose of the industrial development of the nation"* (1909, p. 152).

¹⁹² List considers that *"(...) free trade in agricultural products and raw materials is useful to all nations at all stages of their industrial development"* (1909, p. 259). Because the production of agricultural products and raw materials needs no protection, imposing restrictions on the exchange of these commodities *"(...) must be disadvantageous under all circumstances to both nations — to that which imposes, as well as to that which suffers from such restrictions"* (idem, p. 151).

¹⁹³ According to Shafaeddin (2000, p. 1), List recommends *"(...) selective, rather than across-the-board, protection of infant industries and (...) was against neither international trade nor export expansion. In fact, he emphasizes the importance of trade and envisages free trade as an ultimate aim of all nations; he regards protection as an instrument for achieving development, massive export expansion and ultimately free trade."*

tion for making an accurate selection of those industries eligible for protection, which cast further doubts about the selective nature of his case for infant industry protection.

On the other hand, List's contemporary supporters barely mention that he explicitly introduces some remarkable limitations to his case for infant industry protection, which are particularly relevant for current developing countries. List explicitly states, for example, that not all countries are well suited for infant industry protection. Because he is somehow convinced that manufactures can only flourish in temperate climates, he believes that tropical countries must never attempt to acquire manufactures through artificial means.¹⁹⁴

In addition to limiting the infant industry argument to countries located in the temperate zone, List introduces additional geographical and socioeconomic prerequisites for granting infant industry protection:

“Measures of protection are justifiable only for the purpose of furthering and protecting the internal manufacturing power, and only in the case of nations which through an extensive and compact territory, large population, possession of natural resources, far advanced agriculture, a high degree of civilisation and political development, are qualified to maintain an equal rank with the principal agricultural manufacturing commercial nations, with the greatest naval and military powers” (List, 1909, p. 247).

List's supporters hardly mention the above exceptions — for obvious reasons. If List's recommendations were to be followed to the letter, the immense majority of today's developing countries would be actually banned from using infant industry protection. That was indeed List's intention, because his case for infant industry protection was conceived as a tailor-made economic theory for the incipient industrialists' circles of the United States and his native country Germany.

¹⁹⁴ In his prior book, *The Natural System of Political Economy*, List (1838, pp. 75-76) states: “A country of the torrid zone would make a very fatal mistake, should it try to become a manufacturing country. Having received no invitation to that vocation from nature, it will progress more rapidly in riches and civilization if it continues to exchange its agricultural productions for the manufactured products of the temperate zone. It is true that tropical countries sink thus into DEPENDENCE upon those of the temperate zone, but that dependence will not be without compensation, if competition arises among the nations of temperate climates in their manufacturing industry in their trade with the former (...) This competition will not only ensure a full supply of manufactures at low prices, but will prevent any one nation from taking advantage by its superiority over the weaker nation of the torrid zone (capital letters added).”

The few propositions mentioned in the above paragraphs constitute the theoretical fundament on which the infant industry argument ultimately rests. Looking at these few paragraphs, one may argue that it is inappropriate to summarize the infant industry argument in such a succinct way, taking into account the more or less bulky books previously written in support of it. However, the greater part of these books is dedicated to recount numerous historical examples and case studies, which are usually presented in support of the otherwise squalid theoretical argumentation.

Despite — or even because of — its vague theoretical formulation, the infant industry argument has managed to survive criticism, and continues to occupy an uneasy place in the international trade theory. Eminent neoclassical economists have even considered it to be a legitimate exception to the case for free trade.¹⁹⁵ These economists, though, have supported the argument based on a superficial case-study approach, and usually do not offer any deeper analysis of the underlying theory.¹⁹⁶ Apparently, the intellectual authority of these academics has prevented others from independently reviewing the theoretical and practical merits of the infant industry argument.

Moreover, neoclassical economists have arrived to opposite assessments regarding the theoretic acceptance of the infant industry argument by classical political economists. While some representatives of the neoclassical school of economic thought, for example Marshall¹⁹⁷, have accused the classical political economists of being too dogmatically opposed to the infant industry argument — and therefore implicitly recognizing their rejection of the argument—; others, like Baldwin (1969) and Bhagwati (1988, p. 91), have affirmed that the practice of protecting new industries has a perfectly legitimate role within the classical free trade theory. Obviously, both sides cannot be right in their

¹⁹⁵ Irwin (1998) explicitly mentions Marshall and Taussig (1905) among those who have given some credit to the infant industry argument.

¹⁹⁶ Irwin states: “*What economists including Mill had failed to do was to address the underlying economic structure of the infant industry argument in terms of specific market failures, specify the gains that accrue to a nation from naturalizing a certain industry, and then describe how these gains could compensate for the loss incurred while protecting the industry*” (Irwin, 1998, p. 134).

¹⁹⁷ For a summary of Marshall’s view on free trade, see Deane (1990).

assessment. Therefore, the next section is dedicated to work out the accurate reception of the infant industry argument by classical political economy.

4.3.3 List and the Classical Political Economy

The assessment about the “perfectly legitimate role” of infant industry protection within the classical international trade theory appears to rest rather exclusively on J. S. Mill’s endorsement of the argument in the following passage of his *Principles of Political Economy with some of their Applications to Social Philosophy*:

“The only case in which, on mere principles of political economy, protecting duties can be defensible, is when they are imposed temporarily (especially in a young and rising nation) in hopes of naturalizing a foreign industry, in itself perfectly suitable to the circumstances of the country. The superiority of one country over another in a branch of production, often arises only from having begun it sooner. There may be no inherent advantage on one part, or disadvantage on the other, but only a present superiority of acquired skill and experience. A country which has this skill and experience yet to acquire, may in other respects be better adapted to the production than those which were earlier in the field: and besides, it is a just remark of Mr. Rae, that nothing has a greater tendency to promote improvements in any branch of production, than its trial under a new set of conditions. But it cannot be expected that individuals should, at their own risk, or rather to their certain loss, introduce a new manufacture, and bear the burthen of carrying it on until the producers have been educated up to the level of those with whom the processes are traditional. A protecting duty, continued for a reasonable time, might sometimes be the least inconvenient mode in which the nation can tax itself for the support of such an experiment. But it is essential that the protection should be confined to cases in which there is good ground of assurance that the industry which it fosters will after a time be able to dispense with it; nor should the domestic producers ever be allowed to expect that it will be continued to them beyond the time necessary for a fair trial of what they are capable of accomplishing” (JSM, 1909, V.x.11).

This isolated passage of J. S. Mill — an author which Karl Marx harshly criticized for his shallow syncretism¹⁹⁸ — is clearly insufficient for claiming a general acceptance of the argument by the classical school of economic thought. The great consternation that J. S. Mill’s positive sanctioning of the infant-industry argument caused among political economists and free-trade activists of the time might be a clear indication that it was not

¹⁹⁸ See Marx (1962, p. 21). In the German original of *Das Kapital*, Marx writes “(...) Geistloser Synkretismus, wie ihn John Stuart Mill am besten repräsentiert.”

part of classical economic theory until then.¹⁹⁹ Later, J. S. Mill repeatedly complained in his correspondence about the way his argument was being distorted by protectionists to justify high tariffs in the United States, Canada and Australia in the 1860s. He eventually recanted his view that import protection was an appropriate means of promoting infant industries, although he never abandoned his belief that such industries could exist and that this in principle constituted a genuine exception to free trade (Irwin, 1998, p. 129).²⁰⁰

As a matter of fact, none of the three most renowned representatives of classical political economy — Smith, Ricardo and Marx — have ever given any credit to the infant industry argument. And Marx, being the only one among them who had the opportunity to read List's book, had nothing but scorn with respect to the magnum opus of his fellow citizen.²⁰¹

No one is perhaps better suited for proclaiming the incompatibility of the infant industry argument with classical political economy than List himself. He certainly would have been very surprised to hear that his case for infant industry protection is perfectly supported by classical political economy. It is rather unconceivable that any serious researcher, after making even the most superficial review of *The National System of Political Economy*, could ever conclude that List's analysis is rooted or backed by classical political economy. Right from the introduction of the *National System*, it is obvious that List conceives his case for infant industry protection as a frontal attack to the insights of the

¹⁹⁹ Richard Cobden, the most prominent free trade activist in mid-nineteenth-century Britain, reportedly lamented on his deathbed: "I believe that the harm which Mill has done to the world by the passage in his book on Political Economy in which he favors the principle of protection in young communities has outweighed all the good which may have been caused by his other writings." Quoted from Irwin (1998, p. 128).

²⁰⁰ John Stuart Mill writes: "Though I still think that the introduction of a foreign industry is often worth a sacrifice, and that a temporary protecting duty, if it were sure to remain temporary, would probably be the best shape in which that sacrifice can be made, I am inclined to believe that it is safer to make it by an annual grant from the public treasury, which is not nearly so likely to be continued indefinitely, to prop up an industry which has not so thriven as to be able to dispense with it" (JSM, XVI, p. 1516). And in another letter: "I am now much shaken in the opinion, which has so often been quoted for purposes which it did not warrant; and I am disposed to think that when it is advisable, as it may sometimes be, to subsidise a new industry in its commencement, this had better be done by a direct annual grant, which is far less likely to be continued after the conditions which alone justified it have ceased to exist" (JSM, XVI, p. 1520).

²⁰¹ A detailed exposition of Marx's critique towards List will be given in the next section.

classical school of economic thought. Moreover, the main reason why he chose to fundament his trade policy recommendations largely on a historical rather than on a theoretical analysis is because he thought that the theoretical insights of classical political economy would lead to a rejection of his case. Thus, the supposed sanctioning of the infant industry argument by classical political economists would certainly prove List's methodological approach worthless.

List indicates two aspects that separate his doctrines from those of Smith and his followers (Irwin, 1998, p. 124). First, after introducing a sharp distinction between Smith's *cosmopolitical* economy and his national political economy²⁰², he accuses Smith of ignoring the distinct and separate economic interest of particular nations in favor of a *cosmopolitical* view. Second, List accuses Smith and his school of taking a static view that value only current wealth to the exclusion of other factors that could be used to produce wealth. List believes that more attention should be devoted to production, because “*production renders consumption possible*” (List, 1909, p. 188) and, therefore, “*the power of producing wealth is (...) infinitely more important than wealth itself; it ensures not only the possession and the increase of what has been gained, but also the replacement of what has been lost*” (List, 1909, p. 108).

List is absolutely right in considering his case for infant industry protection basically incompatible with classical political economy. His mischaracterization of classical international trade theory in the *National System*, though, should not be taken as basis for drawing the red line between the two. List's charges against Smith are actually of such an extravagancy, that they do not bear even the most superficial scrutiny. For example, the first *prove* mentioned by List for Smith's cosmopolitical approach is that he entitles his famous book “*The Nature and Causes of the Wealth of Nations*” (sic!). Besides the fact that the precise title of Smith's book is actually longer, List deduces from the word “nations” that Smith was thinking about the wealth “*of all nations of the whole human race*” (List, 1909, p. 97). This rather embarrassing argument is indeed an indication for the scientific merit of List's analysis of classical international trade theory.

²⁰² According to List (1909, p. 97), cosmopolitical economy is the “*(...) science which teaches how the entire human race may attain prosperity*”, whereas political economy is the “*(...) science which limits its teaching to the inquiry how a given nation (under the existing conditions of the world) prosperity, civilisation, and power, by means of agriculture, industry, and commerce.*”

List's second charge regarding the development of the national productive powers, which he deems contrary to the approach of the classical school of economic thought, is artificially fabricated and not at all at variance with the insights of classical political economy. As the reader might remember, Smith already emphasized the positive effect of free trade on the development of the productive powers of labor in the respective countries.

A few pages later, List finally indicates the real point of disagreement between him and Smith: the idea that the well-being of the individual is dependent altogether from the well-being of the whole human race. Smith's cosmopolitical view — i.e. his conviction that the economic interests of people living in different countries are ultimately bound together — is the result of his theoretical insights regarding the mutually beneficial nature of trade — not his point of departure, as List wrongly suggests.

4.3.4 A Classical Critique of the Infant Industry Argument

The following critical review of the infant-industry argument is built on the insights of the classical case for free trade in chapter 2. Furthermore, it rests partially on Marx's *List Critique*. Being a young German intellectual interested in economic affairs in the mid 1840s, the publication of List's book naturally caught his attention. In March 1845, Marx began to write a critical essay on *The National System of Political Economy*. Unfortunately, he left his *List Critique* unfinished. The draft version of the article appears to have remained unknown long after his death, until a Russian translation was published in a Soviet historical journal in 1971.²⁰³ Although being merely an incomplete draft, it is per-

²⁰³ See “Karl Marks o knige F. Lista 'Natsional'naiia sistema politicheskoi ekonomii'”, *Voprosy istorii KPSS*, no. 12 (1971), pp. 3-27. The original German version appeared as K. Marx, “Über Friedrich Lists Buch *Das nationale System der politischen Ökonomie*”, *Beiträge zur Geschichte der Arbeiterbewegung*, no. 3 (1972). It was reprinted as an appendix in Friedrich List, *Das nationale System der politischen Ökonomie*, ed. Günter Fabiunke (Berlin: Akademie-Verlag, 1982), pp. 441-477. The English translation, Karl Marx, “*Draft of an Article on Friedrich List's Book Das nationale System der politischen Ökonomie*”, is in Karl Marx and Frederick Engels, *Collected Works*, vol. 4 (New York: International Publishers, 1975), pp. 265-293. It will be cited here as the “List Critique”.

fectly possible to identify Marx's main lines of critique towards List.²⁰⁴ It can therefore be regarded as a valuable source for a classical critique of List's infant-industry argument.

In the *List Critique*, Marx unmask his fellow compatriot as the leading spokesperson for the aspirations and economic interests of the incipient German capitalists. Not surprisingly, Marx is merciless in his assessment of the nature and scope of the economic interests represented by List:

“The German idealising philistine who wants to become wealthy must, of course, first create for himself a new theory of wealth, one which makes wealth worthy of his striving for it. The bourgeois in France and England see the approach of the storm which will destroy in practice the real life of what has hitherto been called wealth, but the German bourgeois, who has not yet arrived at this inferior wealth, tries to give a new, “spiritualistic” interpretation of it. He creates for himself an “idealising” political economy, which has nothing in common with profane French and English political economy, in order to justify to himself and the world that he, too, wants to become wealthy. The German bourgeois begins his creation of wealth with the creation of a highflown hypocritically idealising political economy” (List Critique, p. 267).

According to Marx, List's audacious attempt to modify the principles of political economy developed by British and French economists is merely the interested viewpoint of the capitalists in a backward country. All the highfalutin talk about national political economy and productive forces of the nation is nothing other than a fraud and disguise for the German capitalist's cynical materialism. Their spiritual talk about the German fatherland and the necessary sacrifice for the common good are nothing but ideological masquerades deliberately set up to mislead and, therefore, a mere cover-up for the drive for money, for wealth, because money and wealth are the real fatherland of the industrialist. Being capitalists in a backward country at the time, the German industrialists seek State protection from the more advanced and powerful English and French capitalists.

Marx pointed out that List's theory was designated, among other purposes, to convince the ruling class that granting protection to certain industries was of national

²⁰⁴ Marx harsh criticism and unmask hostility towards List may surprise some scholars familiar with the work of many self-proclaimed *Marxists*. These so-called *Marxists* usually support List's argument and oppose free trade.

interest. Since the German capitalists of that time, unlike their English and French counterparts, did not have state power at their disposal and therefore could not arbitrarily guide the economic policies of the government according to their economic interests, they had to resort to requests and present their demands as a concession to the State, whereas in reality they demanded concessions from the State.²⁰⁵ List's empty idealistic phraseology about the national economy impedes him to identify the real barriers standing in the way of his pious wishes — the high-ranking nobility, the bureaucracy and the feudal institutions ruling his home country at that time. These bastions of the ancient regime, and not the British and French capitalists, were the true impediments of the process of industrialization in Germany.

Marx rightly regards List's simultaneous support of free trade within a united Germany and his defense of external tariffs as contradictory:

“Thus, the German philistine wants the laws of competition, of exchange value, of huckstering, to lose their power at the frontier barriers of his country! He is willing to recognise the power of bourgeois society only in so far as it is in accord with his interests, the interests of his class! He does not want to fall victim to a power to which he wants to sacrifice others, and to which he sacrifices himself inside his own country! Outside the country he wants to show himself and be treated as a different being from what he is within the country and how he himself behaves within the country! He wants to leave the cause in existence and to abolish one of its effects!” (List Critique, p. 280)

The German capitalists claim government protection from the very same laws of competition operating outside the country that they praise inside the country with regard to proletarians and fellow German capitalists. They want freedom to exploit the proletariat at home without having to compete in such exploitation with foreign capital-

²⁰⁵ Marx states: “*The bourgeois wants protective tariffs from the state in order to lay his hands on state power and wealth. But since [in Germany] unlike in England and France, he does not have state power at his disposal and therefore cannot arbitrarily guide it as he likes, but has to resort to requests, it is necessary for him in relation to the state, the activity (mode of action) of which he wants to control for his own benefit, to depict his demand from it as a concession that he makes to the state, whereas [in reality] he demands concessions from the state. Therefore, through the medium of Herr List, he [the German Bourgeois] proves to the state that his theory differs from all others in that he allows the state to interfere in and control industry, in that he has the highest opinion of the economic wisdom of the state, and only asks it to give full scope for its wisdom, on condition, of course, that this wisdom is limited to providing “strong” protective tariffs. His demand that the state should act in accordance with his interests is depicted by him as recognition of the state, recognition that the state has the right to interfere in the sphere of civil society*” (List Critique, p. 274).

ists. Their motives are thus completely materialistic and selfish. The protectionist policies recommended by List are designed to grant the German capitalists the exclusive right to exploit their fellow citizens, indeed exploit them even more than they were exploited from abroad, because protective tariffs require sacrifices from the consumers (Szporluk, 1988, pp. 35-36).

Although List does recognize the material sacrifices that infant industry protection inflicts to the national consumer, he considers them merely as an initial loss which would be offset by greater economic benefits in the long run. A greater level of independence and security; a better division of labor with its impetus to developing skills and accumulating capital; an optimal commodity composition of trade, which consists in exporting manufactured commodities and importing raw materials and agricultural products — these are the alleged benefits of creating a strong and competitive manufacturing base at home.

Thus, List' case for infant industry protection rests on the premise that less developed countries are allegedly not able to build up a strong domestic manufacturing sector without protection, because they cannot compete in manufacturing with the most advanced countries. List apparently believes that under an international free trade regime the most advanced countries would somehow monopolize the bulk of the world's industrial production, while the less developed countries would be reduced to the role of agricultural producers and providers of raw materials. The majority of economists have too readily accepted this premise without carefully reviewing the actual meaning of the term manufacturing, on which the logical consistency of this premise ultimately rests.

Manufacturing (from Latin *manu factura*, which means “making by hands”) is the use of tools and labor to make things for use or sale. In its earliest form manufacturing was usually carried out by a single skilled artisan with assistants, who learned their masters' trade through long periods of apprenticeship. Curiously, at the beginning most manufacturing occurred in rural areas, where household-based manufacturing served as a supplemental subsistence strategy to agriculture. Later, entrepreneurs started to group a number of manufacturing households into a single enterprise through the so-called *putting-out system*.

The putting-out system was a method of subcontracting work, also known as the *workshop system*. In that system, a central agent gave work to subcontractors who com-

pleted the work in their own facility, usually their own home. It was later replaced by inside contracting, which was the practice of hiring contractors who work inside the proprietor's facility. Finally, inside contracting was replaced by the factory system, where every worker was an employee of the manufacturer directly. Nowadays the term *manufacturing* may refer principally to this latest and most advanced form — the large-scale industrial production in a factory —, but manufacturing can also imply in principle all the other forms mentioned above, covering a vast range of economic activity, from handicraft to high-tech industries.

Industrial production can be described as the mechanical making of standardized products from standardized inputs under identical production conditions. Its goal is a large-scale output of commodities with nearly identical quality attributes. The ascension period of the industrial method of production as the dominant form of manufacturing is known as the *Industrial Revolution*. The logical opposite for industrial methods of production has always been handicraft production, i.e. the individual making of non-identical products under non-identical production conditions.

Although humankind has created different forms of manufacturing for organizing the productive forces of labor, each and every specific form of manufacturing has always described a particular way or method of producing commodities. Therefore, it is logically inconsistent and misleading to contrast industrial production to a certain branch of the economy like agriculture or mining, because these last two activities refer to the production of specific commodities, and not to a particular method of production. It is perfectly possible to encounter industrial methods of production in the extraction of raw materials and food production as well — agro-industrial complexes, for example. Indeed, in economically advanced countries it is rather common to encounter industrial methods of production in every branch of the economy, including economic activities that are usually not associated with the term “industry” like gastronomy (franchise restaurants) and travelling (all-inclusive travel packages).

When proponents of the infant-industry argument emphasize the intrinsic importance of manufacturing, are they referring to the production of certain commodities (which?) or just prizing the benefits of the industrial method of production in general? If they mean the later, then they have to accept the fact that industrial methods of production can be applied in principle to the making of almost every kind of commodity.

After bringing some light to the term manufacturing, it should be clear that the basic argument of those who favor infant industry protection — i.e. that under an international free trade regime it would be impossible for less developed countries to successfully compete with the most advanced economies and build up a strong domestic manufacturing base — cannot be accurate. Anyone who believes that this is indeed a probable outcome does not understand the classical rule of specialization nor comparative advantage — i.e. Ricardo's original meaning of the insight and not the neoclassical caricature of it. Initially, less developed countries might indeed not be able to host the most technologically advanced production facilities, but they will specialize in the production of other commodities according to their comparative advantage, and will also increasingly deploy superior industrial methods of production to fabricate them.

Therefore, List's basic contraposition of agriculture versus manufacturing, although perfectly understandable in the period when the *National System* was written, is not accurate anymore since nowadays agricultural products are produced by industrial methods of production as well. A more promising contraposition in terms of the infant industry argument seems to be the one which differentiates between different kinds of industrial sectors, for example processing vs. extracting industries, high-tech vs. low-tech industries. This approach essentially states that the pattern of specialization matters (i.e. some industrial sectors are intrinsically more valuable than others), that free trade would result in a harmful pattern of specialization for developing countries, and therefore, that the government has to guarantee that the national economy specializes in the right kind of industrial sectors.

The sectors esteemed worthy of support have to be chosen according to dynamic factors. Countries should naturalize industrial sectors with prospects of long-term growth in output, profits and wages (Wade, 1990, p. 355). Amsden cites the case of Taiwan, where the government picked industries based on six criteria; large linkage effects; high market potential; high technology intensity; high value-added; low energy intensity; and low pollution (Amsden, 2004, p. 137).

The problem with these plausible-sounding criteria for targeting industrial sectors lies in the details. Take for example the concept of linkage effects. Hirschman (1958, p. 100) distinguishes two varieties: 1) The input-provision, derived demand, or backward linkage effects, i.e., every non-primary economic activity, will induce attempts to supply

through domestic production the inputs needed in that activity; and 2) the output-utilization or forward linkage effects, i.e., every activity that does not by its nature cater exclusively to final demands, will induce attempts to utilize its outputs as inputs in some new activities. According to Hirschman, the linkage effects of a given product line can be defined as “investment-generating forces that are set in motion, through input-output relations, when productive facilities that supply inputs to that line or utilize its outputs are inadequate or nonexistent. Backward linkages lead to new investment in input-supplying facilities and forward linkages to investment in output-using facilities” (Hirschman, 1981, p. 65).

Besides the complications that accrue when trying to measure the linkage effects of particular sectors (Jones L. P., 1976), it seems that they are already accounted for in the classical concept of division of labor. The sectors with a high level of division of labor are also the ones with the greatest interrelations and linkages with other sectors. However, whereas the classical concept incorporates the benefits of the national and well as international division of labor, the concept of linkage effects seems to regard the economic interrelations between national producers as intrinsically more desirable than the international ones.

Moreover, five of the six criteria mentioned by Amsden refer to issues that correspond to the method of production, and not to specific commodity attributes. One can infer from this that what really matters is not so much the kind of commodities chosen for specialization but how they are produced, i.e. what methods of production are deployed for producing them. Some commodities are highly regarded because they require the most advanced methods of production; they simply cannot be produced without them. Other commodities, like potatoes or sugar, can be produced under the most rudimentary conditions as well. The method of production, along with the national and international competitive conditions, will determine the level of profits, wages and the growth rate of certain economic activities. *Ceteris paribus*, the most sophisticated and efficient methods of production will yield the highest income for the factors of production involved.

Besides the difficulties in selecting the *right* industrial sectors, Smith reminds us to take into account the probable effects in other sectors of the economy as well. By diverting resources from other branches of industry into a particular channel, the targeted

industry may indeed flourish and, after a certain period of time, match or even undercut the unitary real costs of producing a particular commodity in other countries.²⁰⁶ Smith rightfully considers this output to be possible yet far from certain, because no one can anticipate the actions of foreign competitors and governments. But even if the most optimistic outcome is taken for certain and the proclaimed objectives are accomplished, it would not follow that the real income had been increased by such a procedure.

Imports have to be paid ultimately with exports. Thus, if the government decides to protect the commodities produced by an infant industry, it is necessarily withdrawing capital and human resources from other domestic industries. This means that fostering the national production of certain commodities always comes at the expense of the domestic production of other commodities. The classical analysis regarding opportunity costs still applies. Any government-guided channeling of resources towards infant industries necessarily implies an initial withdraw of resources that had been already employed in other branches of the economy. As Smith points out, the immediate effect of protective measures — tariffs or subsidies — is a reduction of wealth. Since the accumulation of capital is dependent on the amount of wealth available, the wealth of a country is likely to augment faster without the initial loss.

Putting the theoretical analysis aside, let us turn the attention now to the prolific historical evidence in favor of infant industry protection. It is a well-documented fact that both early industrialized and newly industrialized countries — with the exception perhaps of Hong Kong — have used some sort of infant industry protection (Shafaeddin, 1998). Is this overwhelming historical evidence not a sufficient proof for the alleged requirement of infant industry protection?

Classical free traders would counter that today's industrialized countries have been able to develop economically *despite* — not because — their extensive record of protectionist measures. But if they have done so, isn't it possible to conclude that international trade policy — whether free trade or protection — is actually irrelevant for achieving economic development? Classical economists would emphatically reject this conclusion. Their conviction has always been that free international trade may speed up the process

²⁰⁶ See Smith (WN, IV.ii.13, p. 458).

of industrial development, not that protection impedes industrialization. They firmly believe that countries can increase the real income of their citizens more rapidly by following a free trade policy than by implementing the most sophisticated system of protection.

Some free traders may be tempted to counter the numerous historical examples of the supporters of infant industry protection by presenting some historical examples in support of the case for free trade. Through historical evidence, though, one may prove a certain level of correlation between two events, but one has to offer a logically consistent theory for establishing a causal relation between them. It is simply impossible to empirically prove the proposition that a country would have achieved a higher rate of economic growth rate under free trade than protection — or vice versa — by relying on historical research alone, because one cannot reproduce the experiment under the same set of conditions. Historical examples may be found in support or against a specific trade policy, but none will be truly convincing for either side of the debate. A satisfactory answer can only be found by carefully contrasting the theoretic case for free trade with the case for infant industry protection. In my opinion, the case for free trade conceived by the classical political economists is by far more convincing and logically consistent than the argument for protecting infant industries.

List's contemporary supporters, particularly those who are fervent sympathizers of the German Historical School, would probably criticize the above affirmation as the standard assessment of a theoretical economist who professes an intrinsic aversion against history and therefore automatically disqualifies objective historical facts as invalid proves. Many neoclassical economists may indeed profess such an intrinsic aversion towards the study of history, but their methodological approach has not been the guiding approach of this doctoral thesis. Fortunately, Karl Marx, who can hardly be regarded as an ahistorical neoclassical economist, also rejects List's profuse historical evidence, unmasking the treatment of history in *The National System of Political Economy* in the following terms:

“Being a true German philistine, Herr List, instead of studying real history, looks for the secret, bad aims of individuals, and, owing to his cunning, he is very well able to discover them (puzzle them out). He makes great discoveries, such as that Adam Smith wanted to deceive the world by his theory, and that the whole world let itself be deceived by him until the great Herr List woke it from its dream, rather in the way that a certain Düsseldorf Counsellor of justice made out that Roman

history had been invented by medieval monks in order to justify the domination of Rome” (List Critique, p. 266).

Current supporters of the infant industry argument, for example Chang (2002), often reproduce List’s attitude of suspecting and looking for undisclosed aims, but instead of specific individuals, he accuses developed countries and the international organizations controlled by them of following a hidden agenda. According to Chang, the real purpose behind the developed countries’ support of free trade is to *kick away the ladder* they have used to reach their present level of economic development. The truth is, though, that the governments of developed countries are rather shutting the developing countries out from the current process of economic globalization by protectionist policies like the Common Agricultural Policy (CAP) of the EU.

In resume, the critical review of List’s case for infant industry protection reveals significant logical gaps in its main propositions. Specifically, List fails to demonstrate how free trade would impede the process of industrialization in less developed countries. Moreover, neither him nor his followers offer solid criteria for selecting the industrial sectors which qualify for infant industry protection. This important omission leaves the door wide open for the possible misuse of the infant industry argument for backing-up vulgar protectionist interests. Furthermore, it seems quite ironic that nowadays List’s case for infant industry protection is presented as the optimal trade policy for developing countries, since he explicitly ruled out the use of infant industry protection for promoting industrialization in small countries located in torrid climate zones — precisely the typical characteristics of the majority of today’s developing countries.

Developing countries do not have to rely on infant industry protection in order to developed their national productive forces and achieve economic growth. On the contrary, a free trade policy, if implemented properly, is perfectly capable of promoting the adoption of industrial methods of production and spurring economic growth throughout the developing countries, as the next chapter will show.

5 Implementing Free Trade In Developing Countries

To expect, indeed, that the freedom of trade should ever be entirely restored in Great Britain, is as absurd as to expect that an Oceana or Utopia should ever be established in it. Not only the prejudices of the publick, but what is much more unconquerable, the private interests of many individuals, irresistibly oppose it.

Adam Smith

5.1 Free Trade and Economic Development

The question of whether the classical case for free trade is suitable for the economic reality of developing countries has already drawn a considerable amount of controversy in the economic literature.²⁰⁷ Myint (1958, p. 317) resumes the twists of this controversy as followed:

“The critics start with the intention of showing that the “nineteenth-century pattern” of international trade, whereby the underdeveloped countries export raw materials and import manufactured goods, has been unfavourable to the economic development of these countries. But instead of trying to show this directly, they concentrate their attacks on the “classical theory”, which they believe to be responsible for the unfavourable pattern of trade. The orthodox economists then come to the defense of the classical theory by reiterating the principle of comparative costs which they claim to be applicable both to the developed and the underdeveloped countries. After this, the controversy shifts from the primary question whether or not the nineteenth-century pattern of international trade, as a historical reality, has been unfavourable to the underdeveloped countries to the different question whether or not the theoretical model assumed in the comparative-costs analysis is applicable to these countries.”

This longstanding academic debate is irremediably vitiated by the misinterpretation of Ricardo’s comparative advantage. As a result, both sides of the debate have inevitably taken an erroneous path. The arguments of the critics regarding the applicability of the traditional interpretation of comparative advantage to the developing countries are essentially right. The problem, however, is that they are criticizing a theoretic model of

²⁰⁷ The arguments of the critics of classical theory of international trade can be found for example in Myrdal (1956), whereas the neoclassical defense of comparative costs analysis is presented in Viner (1953).

international trade that has very little in common — if anything at all — with Ricardo's original insights, and thus should not be considered as part of the classical theory of international trade in the first place. Correspondingly, the neoclassical economists have not been defending the applicability of a *classical* concept to the economic reality of developing countries, but propagating a misinterpreted version of Ricardo's numerical example.

The misinterpretation of Ricardo's numerical example — along with the omission of the other crucial propositions — has lead to the formulation of a rifted, mutilated, contradictory and unrealistic case for free trade, paving the way for theoretic assaults on its core pillars. With the accurate restatement of comparative advantage, though, it is possible to appreciate the plain elegance and logical consistency of the classical case for free trade, as well as the essentially complementary nature of the theoretic insights of Smith and Ricardo with respect to international trade. Moreover, the necessary restatement of the classical case for free trade shows that it is based on a theoretic system of closely interlinked propositions and insights, and thus should not be reduced to a single proposition, as has often been the erroneous practice in recent years.²⁰⁸

Irrespective of the specific answer to the historical question of whether or not the nineteenth-century of international trade has been favorable to the developing countries, it is important to acknowledge that the classical theory of international trade does not recommend any particular pattern of trade for developing countries in general. It does not affirm, for example, that all developing countries should specialize in agriculture whereas the advanced countries should specialize in the production of manufactures, as many critics wrongly suggest. What the classical theory of international trade does is to offer an accurate explanation of past and current patterns of international trade. Furthermore, it demonstrates that the trade patterns resulting from a world trading system based on the principle of free trade would be necessarily beneficial for every country involved, irrespective of its particular level of economic development.

The support for free trade by classical political economists is based on the insight that it would increase the amount of wealth available in a country, which is a necessary pre-

²⁰⁸ See, for example, Shafaeddin (2000, p. 2).

condition for achieving and sustaining a high level of economic development. One of the central features of the classical theory of international trade is precisely the emphasis given to the close connection and mutual interaction between international trade and domestic economic development, in particular the importance of foreign exchange for developing the productive forces of labor. By widening the extent of the market and the scope of the division of labor, international trade creates favorable conditions for technical innovations in the methods of production, enabling the exporting firms to reap off the benefits of increasing returns to scale by the deployment of sophisticated machinery. In classical political economy the theory of international trade is in fact so closely interwoven with the theory of domestic economic development that one may call it the *classical trade-cum-development approach*, extending the term originally coined by Myint (1977) to describe only the Smithean approach to Ricardo as well.²⁰⁹

Until now, this doctoral thesis has been emphasizing rather exclusively the expected positive effects of free trade on the growth of real income per head. The central message and preliminary conclusion of the prior chapters has been that free trade is indeed the most favorable trade policy for increasing the wealth and bettering the general living conditions of the population of any country, independently of its actual level of economic development. It should be seen as a dynamic force in the quest for economic development. That being said, it is important to realize that this assertion does not imply that trade liberalization has only positive effects on the real income of every single individual at any moment in time. Since free trade encourages the productive forces of labor, the resulting increase in labor productivity is not always achieved by producing a greater amount of commodities and services with the same amount of labor; if that were the case, the implementation of free trade would be a benign process for all parties involved, since no one loses. In the real world, however, increases in labor productivity are often the result of producing a greater amount of commodities and services with less amount of labor. Moreover, some national producers might get hurt by the increased

²⁰⁹ Myint calls it *Smith's trade-cum-development approach*, as opposed to Ricardo's "(...) *static cross-section analysis of the existing pattern of trade based on the allocation of the given resources with the given productivity*" (Myint, 1977, p. 231), because he is not aware of the misinterpretation of Ricardo's numerical example.

level of national as well as international competition, and might eventually get out of business.

These individual losses cannot be downplayed nor balanced up by referring to the positive effects of free trade like the lower nominal prices of the imported commodities, which amount to an increase in real income for the national consumers. It is certainly true that every producer is also a consumer, and that all consumers benefit from the resulting lower commodity prices. For those individuals who may lose their jobs or businesses, though, this undisputed fact offers very little consolation, since the expected income loss will certainly exceed any real income gains as consumers, as well as the individual burden of any particular protectionist policy in favor of their industry. Thus, one cannot affirm that free trade is in the best economic interest of every single individual at any moment in time, although it might be highly beneficial for the society as a whole.

A failure to recognize and address the above-mentioned downside may cause considerable economic hardship and distress to particular groups, diminishing the political support for further trade liberalizations. It is therefore not sufficient to merely highlight the crucial role of free trade in achieving economic development, but also to indicate the most reasonable way for its implementation. Therefore, the following section deals with some important recommendations of the classical school of economic thought regarding the implementation of free trade. While these recommendations are valid and relevant for developed as well as developing countries, they are even more so for the later.

5.2 Some Classical Recommendations for Implementing Free Trade

5.2.1 Abstain from Signing Preferential Trade Agreements

The most outstanding feature of present-day international trade politics is the proliferation of preferential trade agreements (PTAs) throughout the world.²¹⁰ Virtually all

²¹⁰ I follow here Bhagwati's recommendation of using the term *preferential trade agreements* instead of *free trade agreements* to highlight the fact that these trade agreements are preferential (i.e., discriminatory) and therefore essentially different from nondiscriminatory free trade. Bhagwati's denomination is also more accurate than the earlier one of *regional* trade agreements (RTAs),

countries are now members of at least one PTA. There are total of over 350 PTAs reported to the WTO. Even if only active PTAs are counted, the estimated total is still large. The vast majority of these PTAs are free trade agreements (FTAs); only a few of them contain an added common external tariff that converts them into customs unions (CUs), like the European Union and Mercosur.

The proliferation of PTAs in recent years has to do with the fact that many politicians mistakenly believe that by signing PTAs they are pursuing a free trade agenda and advancing the cause of free trade (Bhagwati J. , 2008, p. 11). They apparently think that a free trader should support all kinds of trade liberalization, and that any reduction of trade barriers is as good as any other. These politicians seldom realize that free trade areas and customs unions are always a mix of free trade and protection. When a free trade area is formed and trade barriers are eliminated among members, while the external barriers to nonmembers are left unchanged, the handicap suffered by non-members with respect to rival companies producing in the member countries increases. Thus free trade areas are two-faced: they increase free trade among members but also increase protection against nonmembers (Bhagwati J. , 2008, pp. 16-17).

More importantly, PTAs directly contradict the principle of nondiscrimination in trade, which is an essential pillar for building a fair and efficient world trading system. The principle of nondiscrimination is legally codified in the most favored nation (MFN) clause, under which any member of a trade treaty would automatically receive the same lowest tariff that any other signatory of the treaty would enjoy.²¹¹ The MFN principle is one of the cornerstones of the GATT treaty and later the WTO.

The primacy of MFN in the GATT's rules meant that any exceptions to MFN were explicitly provided for. Unfortunately, the relatively stringent requirements, originally

since, as he rightly points out, PTAs are not always regional in any meaningful way. See Bhagwati (2008, p. xi).

²¹¹ This is the unconditional MFN. There is also the conditional MFN, under which tariff reductions made to one member of the treaty had to be offered to another member but did not automatically extend to that other member unless it made some reciprocal tariff reductions as well. The GATT embodied the unconditional MFN as its central organizing principle, with some explicit exceptions such as Article 24, which permitted the formation of free trade areas and CUs.

built into Article XXIV of the GATT treaty as preconditions that had to be satisfied before exceptions to MFN could be invoked, have been progressively reduced to near irrelevance.²¹² The most disturbing disregard of Article XXIV requirements has taken place for the developing countries. During the 1970s the developing countries sought and were granted what came to be known as special and differential treatment (SDT). Under the so-called *Enabling Clause* the developing countries can escape altogether from the discipline of Article XXIV, as long as the PTA is amongst less-developed contracting parties for the mutual reduction or elimination of tariffs and non-tariff measures on products imported from one another.

The main disadvantage of preferential trade agreements is already mentioned in the *Wealth of Nations*:

“When a nation binds itself by treaty either to permit the entry of certain goods from one foreign country which it prohibits from all others, or to exempt the goods of one country from duties to which it subjects those [324] of all others, the country, or at least the merchants and manufacturers of the country, whose commerce is so favoured, must necessarily derive great advantage from the treaty. Those merchants and manufacturers enjoy a sort of monopoly in the country which is so indulgent to them. That country becomes a market both more extensive and more advantageous for their goods: more extensive, because the goods of other nations being either excluded or subjected to heavier duties, it takes off a greater quantity of theirs: more advantageous, because the merchants of the favoured country, enjoying a sort of monopoly there, will often sell their goods for better price than if exposed to the free competition of all other nations” (*WN*, IV.vi.1, p. 545).

Such treaties, however, though they may be advantageous to the merchants and manufacturers of the favoured, are necessarily disadvantageous to those of the favouring country. A monopoly is thus granted against them to a foreign nation; and they must frequently buy the foreign goods they have occasion for, dearer than if the free competition of other nations was admitted. That part of its own produce with which, such a nation purchases foreign goods, must consequently be sold cheaper, because when two things are exchanged for one another, the cheapness of the one is a necessary consequence, or rather is the same thing with the dearness of the other. The exchangeable value of its annual produce, therefore, is likely to be diminished by every such treaty. This diminution, however, [325] can scarce amount to any positive loss, but only to a lessening of the gain which it might otherwise make. Though it sells its goods cheaper than it otherwise might do, it will not probably sell them for less than they cost; nor, as in the case of bounties, for a price which will not replace the capital employed in bringing them to market, to-

²¹² For an interesting recount of the origin of Article XXIV, see Chase (2006).

gether with the ordinary profits of stock. The trade could not go on long if it did. Even the favouring country, therefore, still gain by the trade, though less than if there was a free competition (*WN*, IV.vi.2, p. 545).

In the above quote Smith refers to the fact that by pursuing trade liberalization through PTAs the favoring country obtains its imports relatively more expensive compared to a non-preferential trade liberalization, which secures that a country will always obtain its imports from the most efficient supplier. Thus, by giving preferences to particular foreign exporters, the favoring country incurs in a terms-of-trade loss. It still gains from trade, but less compared to genuine free trade.

Besides this main disadvantage of PTAs with respect to non-preferential trade liberalization, the developing countries jeopardize some crucial advantages directly associated with the MFN principle. First, the MFN principle secures developing countries the same preferences that developed countries often grant to each other, and that developing countries would probably be not powerful enough to obtain in bilateral trade negotiations. Second, having only one set of tariffs for all countries simplifies the rules and makes them more transparent, eliminating the administrative nightmare of having to establish arbitrary rules of origin to determine which country a product must be attributed to for customs purposes. Moreover, these rules of origin often vary across different FTAs by the same country, and across different commodities within each FTA. The complications and costs associated with the handling of different rules of origin are particularly onerous for small companies and poorer countries. All these disadvantages makes PTAs a particularly unattractive trade liberalization option for developing countries relative to the MFN principle.

For the developed countries the biggest motivation to favor PTAs over the multilateral route for freeing trade has been to use PTAs for advancing trade-unrelated agendas — for example intellectual property protection (IPP) — beyond what the multilateral negotiations had already yielded.²¹³ Lobbies in the United States have been particularly

²¹³ Bhagwati (2008, p. 71) states: “Lobbies that wish to advance their trade-unrelated agendas by incorporating them into trade treaties and institutions typically mislead by claiming that their agendas are “trade-related”. Thus, intellectual property protection has to do with collecting royalties, not with trade. (...) By inserting the phrase “trade-related” into the agreement on trade-related intellectual property (TRIPs), the pharmaceutical and software lobbies managed to get the U.S. trade representative at the Uruguay Round to get the issue into the newly

successful in pressuring the U.S. administrations and Congress to impose trade-unrelated areas in one-on-one negotiations with weaker countries. Such concessions have been a precondition for FTA approval (Bhagwati J. , 2008, p. 46).

It is noteworthy that the PTAs among developing countries are almost never characterized by the inclusion of such trade-unrelated issues. They concentrate exclusively on trade liberalization. It is only when the hegemonic powers — principally the United States but increasingly the European Union as well — are involved that one finds the inclusion of such extraneous matters. Trade-unrelated agendas have no demonstrable advantage and, in fact, clear disadvantages for the developing countries. Although they are of central concern for powerful lobby groups within the developed countries, these trade-unrelated issues are often presented as if they were addressing the needs of the developing countries, even if they are not the main producers of intellectual property. Developing countries are forced to accept onerous trade-unrelated demands as the permanent price for preferences whose effectiveness steadily erodes as they are extended to others (Bhagwati J. , 2008, pp. 71-72).

A growing amount of theoretical and empirical evidence suggests that the proliferation of PTAs has a malign effect on the progress of multilateral trade negotiations.²¹⁴ PTAs provide an incentive for large trading partners like the U.S. and the European Union not to reduce MFN tariffs, because the value of its preferential tariffs decreases with any reduction of the MFN tariffs. Thus, the PTAs should be regarded as *stumbling blocks* rather than *building blocks* toward multilateral nondiscriminatory trade liberalization, according to the terminology introduced by Bhagwati (1991).

formed WTO in 1995. Thanks to this trickery, and use of U.S. political muscle, the WTO became a tripod with three legs: two legitimate ones (the GATT on goods trade and the GATS on service trade) and one illegitimate one (TRIPs)."

²¹⁴ See Krishna (1998). For an overview of the major developments in the theory of PTAs after 1945, see the Appendix in Bhagwati (2008). For the empirical evidence regarding the U.S., see Limão (2006).

The negative effects of the proliferation of PTAs can be partially contained or reverted by reducing the MFN tariffs to negligible levels.²¹⁵ However, as Bhagwati — one of the most prominent supporters of this course of action —, recognizes, this is a rather partial solution, since it only addresses the damage done by PTAs to the world trading system through tariff preferences; it does not address the issue of trade-unrelated agendas, which are particularly onerous for developing countries.²¹⁶ The next section suggests a more radical course of action.

5.2.2 Implementing Free Trade Unilaterally

Every country, irrespective of its particular level of economic development, should pursue unilateral trade liberalization. This simple and plain solution suggested by the economic science — at least by the classical school of economic thought —, is yet very difficult to implement in the political arena, since it has to overcome two formidable obstacles: the vested economic interests of powerful groups and the prejudices of the majority of people. Many wrongly consider free trade as a concession that one government makes towards other governments, with the sole purpose of obtaining a similar concession from them. Consequently, reciprocity is considered a necessary precondition for implementing free trade at home, because otherwise it would be a harmful trade policy for the national interests. As classical international trade theory shows, though, free trade is in the very best interest of every nation, irrespective of other governments' actions, and should thus be implemented unilaterally.

Unilateral trade liberalization is the opposite of what Jagdish Bhagwati (1991) has called *aggressive unilateralism*, the controversial new trade tactic adopted by the U.S. government in 1985. Before that year, the U.S. postwar approach to trade liberalization had been to encourage multilateral negotiations in which the participating countries exchange reciprocal commitments to lower trade barriers under the auspices of the

²¹⁵ Bhagwati (2008, p. 97) states: “Preferences are relative to the MFN tariff. So if we cannot do much about PTAs directly to remove the preference, we can virtually eliminate PTAs by reducing the MFN tariff itself to zero.”

²¹⁶ See Bhagwati (2008, p. 98).

GATT. Under the new trade tactic, though, the U.S. government aggressively demands from its trading partners to reduce real or imagined barriers to U.S. exports and direct investment, and to enforce the protection of intellectual property rights of U.S. corporations. This U.S. trade tactic is unilateral in two respects. First, the U.S. government frequently decides unilaterally if a foreign trade practice is unfair. Second, it typically requires that its trading partners should unilaterally liberalize without any reciprocal actions from the United States (Bayard & Elliott, 1994, p. 1).

The recommendation of implementing free trade on a unilateral basis, though, should not be interpreted as an invitation for the developing countries to ignore longstanding trade restrictions and protectionist barriers put in place by the developed countries. This novel version of protectionism — the traditional version of protectionism was mostly put in place by less developed countries towards the most advanced country of the time — is indeed very harmful for both sides, effectively curtailing the economic development efforts of many developing countries. Reciprocity is indeed important and necessary, but it should not be viewed as a pre-condition for implementing free trade at home. Perhaps the developing countries may accomplish their strategic objective of removing the protectionist barriers of the developed countries more rapidly by implementing free trade on a unilateral basis and, simultaneously, strengthening their lobbying efforts among those groups and economic sectors in the developed countries which favor free trade.

5.2.3 Refrain from Automatic Retaliation

The question of whether a country should implement free trade on a unilateral basis is completely different from the question of whether a government should retaliate for trade restrictions recently imposed by other trading partners. New restrictions on international trade never fail to hurt both parties — the country that put them in place as well as the host country of the companies that produce the targeted commodities. “*Revenge in this case*”, as Smith rightly points out, “*naturally dictates retaliation, and that we should impose the like duties and prohibitions upon the importation of some or all of their manufactures. Nations, accordingly, seldom fail to retaliate in this manner*” (WN, IV.ii.38, p. 467).

In the following paragraph, though, Smith questions the economic logic behind these retaliations:

“There may be good policy in retaliations of this kind, when there is a probability that they will procure the repeal of the high duties or prohibitions complained of. The recovery of a great foreign market will generally more than compensate the transitory inconveniency of paying dearer during a short time for some sorts of goods. To judge whether such retaliations are likely to produce such an effect, does not, perhaps, belong so much to the science of a legislator, whose deliberations ought to be governed by general principles which are always the same, as to the skill of that insidious and crafty animal, vulgarly called a statesman or politician, whose councils are directed by the momentary fluctuations of affairs. When there is no probability that any such repeal can be procured, it seems a bad method of compensating the injury done to certain classes of our people, to do another injury ourselves, not only to those classes, but to almost all the other classes of them” (*WN*, IV.ii.39, p. 468).

Smith is therefore against automatic retaliations, because a retaliatory tariff does not benefit the national producers affected by foreign trade restrictions and prohibitions. In fact, these national producers are hurt double by this kind of retaliation, since they — along the rest of the country — have to buy dearer the foreign commodities targeted by the retaliatory tariffs.

Retaliatory tariffs are only justified if they lead to the repeal of trade restrictions and prohibitions imposed by foreign governments. However, to judge whether the use of retaliatory tariffs as a bargaining counter in trade negotiations will bear the desired result is beyond the confines of the economic science. If retaliatory tariffs are unlikely to bring about the repeal of these trade restrictions and prohibitions, they are not an appropriate response. Granting direct support to the affected national producers in form of temporary subsidies or tax exemptions seems to be a more effective measure for alleviating the economic hardships occasioned by foreign trade restrictions and prohibitions.

5.2.4 A Gradual Implementation of Free Trade

Both Smith and Ricardo were very much aware and concerned about the potential distress caused by any sudden change in the general conditions of international trade as a result of a hasty implementation or restoration of free trade. In their times, these sudden changes in international trade were often caused by the recurrent outbreak of war and the subsequent restoration of peace. Smith was particularly concerned about the effects on those branches of the economy that employ many people, as the following paragraph shows:

“The case in which it may sometimes be a matter of deliberation, how far, or in what manner it is proper to restore the free importation of foreign goods, after it has been for some time interrupted, is, when particular manufactures, by means of high duties or prohibitions upon all foreign goods which can come into competition with them, have been so far extended as to employ a great multitude of hands. Humanity may in this case require that the freedom of trade should be restored only by slow gradations, and with a good deal of reserve and circumspection. Were those high duties and prohibitions taken away all at once, cheaper foreign goods of the same kind might be poured so fast into the home market, as to deprive all at once many thousands of our people of their ordinary employment and means of subsistence. The disorder that this would occasion might no doubt be very considerable” (*WN*, IV.ii.40, pp. 468-469).

A few paragraphs later, Smith expressed similar concerns regarding the negative impact on the economic interests of factory owners with a high amount of fixed capital invested:

“The undertaker of a great manufacture who, by the home markets being suddenly laid open to the competition of foreigners, should be obliged to abandon his trade, would no doubt suffer very considerably. That part of his capital which had usually been employed in purchasing materials and in paying his workmen, might, without much difficulty, perhaps, find another employment. But that part of it which was fixed in workhouses, and in the instruments of trade, could scarce be disposed of without considerable loss. The equitable regard, therefore, to his interest requires that changes of this kind should never be introduced suddenly but slowly, gradually, and after a very long warning” (*WN*, IV.ii.44, p. 471).²¹⁷

In order to minimize the negative impacts of any sudden change in the general conditions of international trade on these groups, both Smith and Ricardo recommended a slow and gradual implementation of free trade. This clearly underscores the assertion that both classical political economists were pragmatic free traders — not free-trade ideologues. They were able to see the potential downsides of a hasty restoration or implementation of free trade, and advocated for proper actions to address them. Nevertheless, a gradual implementation of free trade may not be sufficient for safeguarding the economic interests of the most vulnerable groups. Additional measures should be considered, as indicated in the next section.

²¹⁷ Ricardo (Vol. I, chapter XIX, pp. 263-272) expressed similar concerns.

5.2.5 Public Investments in Human Capability-Expansion

Until now, this doctoral thesis has been focused on highlighting the beneficial effect of free trade on the growth of real income per head, in correspondence with the analysis of Smith and other classical political economists. This approach implicitly sets the achievement of the highest possible real income as the paramount goal of economic policy. A similar approach can be found in the origins of development economics, the branch of the economic science that is dedicated to study the process of economic development. When development economics emerged as a distinct field of study after the Second World War, its main focus was also on real income growth. While this was also a central issue in Smith and other classical political economists, one should remember that they always considered income as one of several distinctive means to important ends, which are very different from earning the highest possible income. The classical political economists recognized that individuals have reasons to value many things other than income and wealth, which relate to the real opportunities to lead the kind of life they would value living. They considered the freedom to lead valuable lives as an intrinsically important goal for every individual (Drèze & Sen, 1995, p. 10).

In accordance with the above view, Drèze and Sen propose to conceive the process of economic development in terms of the expansion of the real freedoms that the citizens enjoy to pursue the objectives they have reason to value, and in this sense the expansion of human capability can be seen as the central feature of the process of development. The term capability refers to the alternative combination of doings and beings from which a person can choose. Thus, the notion of capability is essentially one of freedom — the range of options a person has in deciding what kind of a life to lead. According to this view, poverty lies not merely in the impoverished state in which a person actually lives, but also in the lack of real opportunity — given by social constraints as well as personal circumstances — to choose other types of living. Poverty is, thus, ultimately a matter of capability deprivation (Drèze & Sen, 1995, pp. 10-11).

The expansion of human capabilities can clearly be enhanced by growth of income per head, but the impact of general economic growth on human capabilities can be extremely variable, depending, for example, on whether it is a participatory or non-participatory process of economic growth (Drèze & Sen, 1989), and whether the eco-

conomic gains from growth are channeled into remedying the capability deprivations of the most needed. Therefore, economic policies should be judged, ultimately, by their impact on the enhancement of the capabilities that the citizens enjoy. This differs sharply from the more standard practice of judging economic policies by their contribution to the growth of real incomes — seen as a merit in itself. To dispute this erroneous practice, though, should not be seen as an invitation to ignore the important instrumental role of economic growth in enhancing human capabilities; it is a matter of being clear about ends and means (Drèze & Sen, 1995, p. 12).

If the central challenge of economic development is understood in terms of the need to expand human capabilities and social opportunities, then trade liberalization must necessarily be seen as occupying only one part of a larger stage. This means that a free trade policy should always be accompanied by public policies that expand the provision of public education²¹⁸, job training, health care and infrastructure.

At this point of the analysis one can appreciate the importance of making a sharp distinction between the classical and neoclassical case for free trade, and liberating the former from the unnecessary and harmful association with the notions of *laissez-faire* and general economic equilibrium. Both notions promote a picture of confrontation and mutual exclusion between the market and State, and try to minimize the role played by the State in the economy. In reality, though, the relationship between the market and the State in the opening up of economic opportunities and the social conditions that facilitate the use of those opportunities is first and foremost a complementary one.²¹⁹ As Drèze and Sen rightly point out:

“On the one hand, the opportunities offered by a well-functioning market may be difficult to use when a person is handicapped by, say, illiteracy or ill-health. On the other hand, a person with some education and fine health may still be unable to

²¹⁸ For the crucial connection between education and economic progress, see Schultz (1962, 1963, 1982).

²¹⁹ According the Drèze and Sen, the failures of India with regard to economic development, for example, can be scarcely seen simply as the result of an overactive government. What can be justifiably seen as *overactivity* in some fields has been inseparably accompanied by thoroughgoing *underactivity* in others. It is not a simple question of *more* or *less* government. Rather, it is a question of the type of governance to have, and of seeing the role of public policies in promoting as well as repressing social opportunities. See Drèze & Sen (1995, p. 8).

use his or her abilities because of the limitation of economic opportunities, related to the absence of markets, or overzealous bureaucratic control, or the lack of access to finance, or some other restraint that limits economic initiatives. Social opportunities are, thus, influenced by a variety of factors — among other things, the state of educational and health services (and public policies that deal with them), the nature and availability of finance (and policies that affect them), the presence or absence of markets (and policies that promote or restrict them), and the form and reach of bureaucratic control in general (including the barriers to enterprise imposed by such control). (...) In focusing on social opportunities, we propose a perspective that is substantially broader than the narrow view that concentrates simply on promoting markets and competition, as well as the similarly narrow “contrary” view that just wants to debunk liberalization” (Drèze & Sen, 1995, pp. 6-7).

One can even argue that a gradual process of trade liberalization increases the need for a social safety net. Under free competition people are confronted with an economic environment characterized by a high level of dynamism and frequent restructuring. Some national industries will rise, while others may decline or completely disappear. This restructuring process may imply relocation of employment or temporary unemployment, decline or abandonment of certain towns or regions, loss of some industry-specific skills and other changes in the nature of society.²²⁰ If jobs are lost, employment and other social policies should be in place in order to retrain people, inform them of employment opportunities and assist them during the transition period.

Free trade so conceived and properly implemented as recommended by classical political economy will never fail to result in higher economic growth rates and rising living standards for the population in the long run. The final section will deal with some general recommendations regarding the best way to respond to the risks associated with the increasing level of interdependence between national economies.

5.3 Reducing the Risks of Interdependence through Integration

It is a rather undisputed fact that the widespread adoption of a free trade policy would spur the flourishing international trade even further, leading to an ever-increasing level of interdependence between national economies throughout the world. Notwith-

²²⁰ Some argue that these personal and social costs have to be in some way subtracted from the gains from trade (Prasch, 1996).

standing the important benefits — the gains from trade — of this growing economic interdependence, it would also increase the level of exposure and vulnerability of domestic economies to external economic disturbances.

The increased vulnerability to external shocks poses a considerable risk for the economic stability of small countries in particular — the typical size for the majority of developing countries —, since a greater percentage of their total productive capacity is usually oriented towards export markets. Any severe economic or financial turmoil in one of its largest trade partners would certainly affect crucial sectors of the national economy. The part of the productive capacity that cannot be rapidly reoriented from export to domestic markets would become temporary idle.

Some may argue that the risks associated with an ever-increasing level of economic interdependence between national economies should be considered as the necessary price to pay for the enhanced economic opportunities of international specialization. Others may counter that the economic and social costs of recent external shocks have been too high to ignore or tolerate. Both points of view are valid, and, fortunately, each of them can be honored without detriment of the other, since they are not mutually exclusive. By creating the proper international institutional framework it is rather feasible to tackle the risks of growing economic interdependence without curtailing the benefits of international specialization and economic globalization.

The practical evidence suggests that external risks can be greatly reduced by pursuing economic integration at the regional level. Regional integration projects, when envisaged as open regionalism, not only encourage trade within member states but also with the rest of the world, while helping smaller countries in particular to dampen the negative impact of external economic disturbances. In order to accomplish these goals, regional integration efforts should not be conceived as projects of resistance to global market forces by which state actors re-impose boundaries at a supranational level, but as multinational institutional arrangements aimed at reducing the risks associated with

commercial and financial interdependence.²²¹ Thus, a viable future for regionalism²²² lies in building common institutions and pursuing deeper forms of economic, political and social integration at the regional level, while abstaining from granting preferential trade agreements among participating countries.

In summary, free trade should not be conceived and implemented merely as an unfettered exchange of commodities and services across political borders throughout the world. It should also include the unfettered movement of the two broad categories of factors of production — capital and labor. Therefore, the current process of economic globalization should be accompanied and supported by projects of economic, political and social integration at the regional level. The realization of such a broadly defined free trade principle should be the strategic goal of international economic policy for the twenty-first century.

²²¹ The relationship of regionalism to globalization is modeled in the literature either as open regionalism aimed at integration with the global market or as a project of resistance to global market forces. See Nesadurai (2002).

²²² The term *regionalism* is defined here as a states-led project to coordinate policies in a given region. It is, thus, contrasted with regionalization, which is defined as a process of regional integration driven primarily by markets, or more specifically, by the actions of private corporate/economic actors. See Wyatt-Walter (1997).

Conclusions

If all economists were laid end to end, they would not reach a conclusion.

George Bernard Shaw

Free trade would be a powerful lever for spreading economic growth and development around the world if it would be embraced and implemented by many governments. It is in fact the most suitable international trade policy for developed as well as developing economies.

The success of a free trade policy depends to a great extent, though, on how it is conceived, explained and implemented in the real world, which is predetermined by the underlying economic paradigm that sustains it. As this doctoral thesis has shown, there is not a single monolithic case for free trade in international trade theory but two fundamentally different, competing and mutually exclusive cases: the case for free trade made by classical political economy, and the currently mainstream case for free trade of the neoclassical school of economic thought.

The core contribution of this dissertation is the restatement of the classical case for free trade. This restatement is based on the accurate interpretation of Ricardo's comparative advantage insight. In contrast to what is actually written in contemporary economic textbooks, Ricardo's numerical example of chapter 7 of the *Principles* does not offer a new rule or law for international specialization. What he originally intended to prove with the four magic numbers were two novel and interrelated propositions: 1) that his labor theory of value does not determine the relative value of commodities in international exchanges when the factors of production — labor and capital — are immobile between countries; and 2) the associated corollary that a country would import a certain amount of a commodity although it could produce it with less amount of labor than the exporting country.

These two new propositions are not laws or principles that lead to free trade. Nevertheless, they constitute important insights for the free trade case. The proposition regarding the non-appliance of the labor theory of value in international trade offers a plain explanation for why higher real labor costs in poorer countries do not command higher prices for their commodities in international markets. The corollary of this prop-

osition regarding comparative advantage refutes the previous notion that commodities would be produced in the locations with the lowest real costs of production. This further strengthens the insight that every country, no matter how rich or poor, has the chance to participate under favorable terms in the free international exchange of commodities and services.

The accurate interpretation of the numerical example in the *Principles* reconciles Ricardo's propositions with Smith's theory of international trade, and restitutes Smith's insight regarding the benefits of the division of labor and specialization to its original place as the core argument in favor of free trade. Both classical political economists also agreed on the propositions that free trade would increase the amounts of commodities available for consumption to the utmost, that the gains from international trade are mutual, and that these gains consist mainly of an increase in labor productivity in the respective countries.

Smith and Ricardo used the same rule of specialization, which can be applied to the specialization between individuals, regions and countries. It has been labeled here as the classical rule of specialization. Applied to international exchanges the classical rule of specialization states it pays to import commodities from abroad whenever they can be obtained in exchange for exports at a smaller real cost than their production at home would entail. The economic gains from this international exchange can be measured by calculating the difference between the real costs of the exported commodities that have been sent in exchange for the imports, and the expected real costs of producing the imported commodities at home.

For the application of the classical rule of specialization there has to be persistent real cost differences between countries in producing the amounts of commodities traded. These persistent real cost differences among countries are the result of different natural conditions — such as soil, climate and geographic location — and artificial advantages — like education, production skills, economies of scale and historical development. These factors are usually labeled in the economic literature as sources of comparative advantage.

The observed pattern of international trade is the result of several sources of comparative advantage working simultaneously. Therefore, any modeling approach that

highlights a single factor and excludes all others by assumption would offer an incomplete explanation for the current pattern of international trade.

The restatement of the classical case for free trade shows that it does not rely on unrealistic assumptions like, for example, constant return to scale or perfect competition. These assumptions were introduced later on by the neoclassical theory of international trade and its associated trade models.

Furthermore, the accurate interpretation of Smith's international trade theory dismisses the current association of the free trade case with the laissez-faire doctrine. Although Smith rejected most government interventions into the free exchange of commodities across political borders, he did not preclude government intervention in other areas of the economy. Smith rejects most trade interventions because they are not made on behalf of the general interest of the society, but on behalf of private interests of powerful groups. These trade interventions impose considerable costs to the consumers, and will most likely fail to achieve the proclaimed objectives.

Instead of assuming an automatic compatibility between selfish private interests and the interests of the society as a whole, Smith holds to a more nuanced position that competition within the framework of natural liberty ensures a broad but imperfect harmony of the private interests of individuals and the general interest of the society, with the government creating an institutional framework that would regulate the economic activities of the private economic agents where a conflict of interest may subsist. Under this conception, government interference with the free operation of self-interest is not only allowed but also necessary in order to secure the economic progress of the country.

Under the influence of the mainstream neoclassical paradigm, the case for free trade has lost its once formidable intellectual appeal. Neoclassical economists have degraded the issue of free trade to a mere appendix of the modern version of the laissez-faire doctrine: the general economic equilibrium paradigm.

One of the weakest points of the general economic equilibrium paradigm consists of its failure to provide a satisfactory and straightforward explanation for increases in productivity and economic growth. This intrinsic weakness makes it the least suitable theoretic framework for an appealing case for free trade, which should be built upon the beneficial effects of international trade on the productive forces of labor and the economic growth of a country.

The general economic equilibrium paradigm incorporates unrealistic assumptions to the free trade case like constant return to scale and perfect competition, which are not part of the original case for free trade formulated by classical political economy. In addition to this, neoclassical economists have formulated theoretic trade models that mystify core classical insights like the one regarding comparative advantage.

The so-called *Ricardian* model of modern economic textbooks, for example, departs in key aspects — main purpose, logical construction, assumptions and implications — from Ricardo's numerical example in chapter 7 of the *Principles*. Ricardo's original numerical example does not assume constant labor costs, zero transportation costs and perfect internal mobility of the factors of production. Neither does it imply complete specialization, as the *Ricardian* model does. More importantly, the *Ricardian* model omits any reference to the main proposition of the numerical example in the *Principles* regarding the labor theory of value. Given these differences, one should not consider the *Ricardian* model of contemporary economic textbooks as part of Ricardo's theory of international trade.

Besides the questionable merit of linking free trade to the general economic equilibrium paradigm, the neoclassical trade models have not introduced a single original idea to the theory of international trade. Smith clearly anticipated Heckscher's idea regarding the importance of the differences in the relative factor supplies and relative factor prices for the determination of comparative advantage and the pattern of international trade. But instead of assuming the quantities and the productivity of resources to be static and exogenously given — as the Heckscher-Ohlin approach does —, Smith views the long-run changes in factor supplies and their productivity as the outcome of the two major forces of domestic economic development: capital accumulation and the division of labor.

The neoclassical case for free trade offers plenty of weak spots for potential challenges from scholars that oppose the idea of free trade. Not surprisingly, it has been recently challenged by new arguments — strategic trade policy and external economies — as well as an old argument — infant industries — for protection. These arguments for protection can be refuted by the restatement of the classical case for free trade.

The classical case for free trade also provides valuable insights for a successful implementation of free trade, which are particularly relevant for developing countries. It

urges governments to abstain from signing PTAs. Instead, they should implement free trade unilaterally, and abstain from automatic retaliations to foreign trade restrictions. Those governments who have embraced the free trade principle should pressure others for reciprocity. The increased level of vulnerability to external economic disturbances can be counterbalanced by a higher degree of economic, social and political integration at the regional level.

Finally, free trade should always be implemented gradually, in order to take care of those groups who will be affected in the short run by this economic policy change. It should always be accompanied by public policies that expand the provision of public education, job training, health care and infrastructure.

Economic globalization is a discretionary process — not an inevitable one. Human wisdom and insight can and should direct the general direction of this process. There are indeed more desirable alternatives to the present version of economic globalization, but none of them imply the return to protectionism and national self-sufficiency. A greater degree of national self-reliance would necessarily imply less economic wealth available to the population of a particular country. The material wealth available in a society is always the fund on which local and national governments rely to finance the valuable services it should provide to its residents — education, health care, modern infrastructure, justice and protection, to name the most important ones. Less material wealth available necessarily means a diminished ability to provide these vital social services. Moreover, free international trade makes an important contribution to securing peace among nations. Therefore, the case for free trade is not in any way diminished by taking non-materialistic goals into consideration.

Although formulated over two hundred years ago, the classical case for free trade has not lost its original intellectual appeal and practical relevance. On the contrary, it still offers valuable insights for building an international economic order which benefits the overwhelming majority of the world's population currently living in developing countries. For that it needs to be restituted to its original place as the mainstream explanation for the virtues of free international trade.

Recommendations

*If a man will begin with certainties, he shall end in doubts;
but if he will be content to begin with doubts, he shall end
in certainties.*

Francis Bacon

This doctoral thesis has evidenced the intrinsic strength and appeal of classical political economy in dealing with current economic problems related to international trade. The theoretical elegance yet relative simplicity of the classical case for free trade first formulated by Adam Smith and later corrected and complemented by David Ricardo is striking, particularly if one compares it to the currently mainstream neoclassical case for free trade.

Therefore, I strongly recommend a revival of the academic interest in the classical school of economic thought and its associated concepts and analytical perspectives. Classical political economy should not be seen anymore as a mere forerunner of the mainstream neoclassical paradigm, but as a viable alternative to it.

Moreover, this doctoral thesis has also put into evidence the paramount role of value and distribution theories in the formulation of international trade theories. It is accurate to affirm that value and distribution theories are at the very core of any theoretical system about the functioning of the economy. Thus, I would like to recommend the repositioning of Ricardo's labor theory of value as a legitimate alternative to the mainstream general economic equilibrium paradigm.

The above recommendations would certainly reorient a significant part of present-day economic research from the current fixation with arid mathematical puzzles created by the general economic equilibrium paradigm to the search for viable remedies to the obtrusive socioeconomic problems of our times. This change of focus would probably cure many contemporary economists from their noticeable policy-reticence, and absolve the economic science from the current critique that it does not make any significant contributions to the solution of real-life economic problems.

In terms of methodological approach, the restatement of the classical case for free trade has been accomplished by going back to the primary sources, instead of relying on

secondary literature and received opinions. Although often a time-consuming and demanding process, this research approach never fails to pay off.

It is a rather vivid indication for the unsatisfactory state of present-day economic instruction at universities that nowadays it is perfectly possible to graduate in economics without having ever to consult seminal economic literature like Smith's *Wealth of Nations* or Ricardo's *Principles*. Instead of encouraging today's undergraduate students to read and interpret the primary sources, the present economic textbooks train them in mathematical models like the so-called *Ricardian* and Heckscher-Ohlin models, which barely resemble and often contradict the original ideas and propositions of the economists after which they have been labeled.

Given the many contradictions and incompatibilities of the *Ricardian* model with Ricardo's authentic theory of international trade, the authors of these economic textbooks might perhaps consider the possibility of replacing the former with the original numerical example of the *Principles*. The proposed change would not only increase the theoretical accuracy of these textbooks with respect to the primary source, but would also be advantageous from a didactical perspective, since Ricardo's original demonstration of the comparative-advantage proposition is clearly superior in terms of simplicity and reliance on realistic assumptions. As a second option, the textbook authors could at least rename the *Ricardian* trade model to, for example, Constant Unitary Labor Costs Model (CULC), in order to disassociate it from Ricardo's theory of international trade.

The current process of economic globalization is the most significant development of our lifetime. For this process to yield the expected benefits for the majority of the world's population, it has not only to be conceived and implemented differently, but also explained in a way that everybody — not only professional economists — can understand. Those who are committed to this valuable task of instruction may find in the classical school of economic thought a suitable theoretic framework to begin with.

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