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**MARKET REALISM: POLITICAL DEVELOPMENT, CURRENCY
RISK, AND THE GAINS FROM TRADE UNDER THE LIBERAL
INTERNATIONAL ECONOMIC ORDER**

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
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For the children who do not see adulthood, and the parents who bury them.

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CHAPTER I

THE HARMONY OF INTERESTS REVISITED

The economic expert, dominated in the main by *laissez-faire* doctrine, considers the hypothetical economic interest of the world as a whole, and is content to assume that this is identical with the interest of each individual country. The politician pursues the concrete interest of his country, and assumes (if he makes any assumption at all) that the interest of the world as a whole is identical with it. (Carr, 1939/1964:55)

Consider the irony. While the terrorist attacks were themselves indefensible, the horrifying specter of ordinary people cheering as thousands of Americans lost family members served as a powerful reminder that billions of people are angry with the United States and hold our policies responsible for their misery. The recognition that the world's poor continue to represent a significant threat to the world order led President Bush to answer UN Secretary General Kofi Annan's call for more aid for developing countries, in an abrupt reversal of Bush's early rejection of multilateral interventionism. Rather than abandoning the U.S.'s trade-not-aid policy at the Monterrey conference, however, President Bush responded to the terrorist attacks on the most visible symbol of the American push for globalization in trade and financial markets by tying aid for developing countries to trade liberalization, arguing that growth through trade is the antidote to third world ills.¹ If globalization is indeed the

¹ "We fight poverty because hope is an answer to terror... To be serious about fighting poverty,

first step toward reducing poverty in developing countries, why are ordinary citizens of developing countries leading the opposition?

Muslim fundamentalists are not alone in their belief that globalization has favored the rich at the expense of the poor. In Latin America, violent protests against pro-market reforms have roiled Peru, Venezuela, Paraguay, Bolivia, and Brazil, as unemployment rates have increased, economies have stagnated, and services to the poor have been cut.² Proponents of globalization have typically dismissed its critics as angry victims of corrupt leaders who have deftly deflected blame for their own failed policies. In recent years, though, third world skeptics have been joined by highly regarded economic experts. Critics of the Washington Consensus and its implementation by leading intergovernmental organizations now include mainstream economists such as Paul Krugman, Jeff Sachs and Joe Stiglitz, WTO Director General Mike Moore, and financier George Soros.³

The disagreement raises questions not only about policy issues, but also about prevailing paradigms in two academic literatures. In political science, a debate over the proper framework for understanding international economic relations and the role of international institutions has been dominated by the neoliberal institutionalists. Taking neoclassical economic orthodoxy at its word, they argue that free trade benefits all trading partners and view the political obstacles as problems of coordination, not of inherently opposed interests. Institutions such as the GATT/WTO, IMF and World Bank promote such coordination, thereby benefitting all countries. Neomarxist

we must be serious about expanding trade. Greater access to the markets of wealthy countries has a direct and immediate impact on the economics of developing nations." President Bush, quoted by Tim Weiner (2002) "More Aid, More Need: Pledges Still Falling Short." *New York Times*, March 24, 2002, p. A4.

² See, for example, Juan Forero (2002) "Still Poor, Latin Americans Protest Push for Open Markets." *New York Times*, July 19, 2002, p. A1.

³ Krugman (1998), Sachs (1998), Stiglitz (2002), Moore in Weiner (2002), and Soros in Kahn (2002).

and dependency theorists, on the other hand, argue that free trade regimes benefit developed countries at the expense of developing countries and dominant groups within developing countries at the expense of other groups; they advocate trading regimes that give developing countries special considerations, and they predict conflict in the international economic arena. Realists concur with the prediction of conflict, but for different reasons: they view state interests in an anarchic system as inherently competitive. Curiously, the realist and neomarxist perspectives seem to get today's politics right: they both anticipate the north-south conflict over trade and finance regimes. While the neoliberal perspective has dominated largely because its economic microfoundations are clearer, its silence *vis a vis* the principal political divide in the international economic realm is disturbing. A primary aim of this work is to reconcile the competing claims of the three perspectives, a task that will begin in the current chapter.

Resolving the debate turns in part on establishing whose interests are served by liberalized trade; and the debate also raises questions about the standard paradigm in international trade theory. Chapter two, then, reviews the economic arguments in favor of free trade and examines the material incentives that follow from the economic models. A central theme in this work is that there is much to glean from thinking about politics and economics together, as opposed to honoring traditional disciplinary boundaries. Doing so exposes a chink in the foundations of the neoclassical economic analysis concerning the gains from liberalized trade. Standard models are based on barter economies; they do not consider the effect that political differences play in the pricing of different currencies, and the implications that the market's distinction between "hard" and "soft" currencies has for the distribution of the gains from trade. Chapter three provides a revision of the standard trade model that addresses this shortcoming. Empirical evidence for the revised model is presented in Chapter four.

The implications for understanding politics in the international economic realm are

summarized in the final chapter. I derive the chief conclusion of the dependency school theorists – that developed countries gain more from liberalized trade than developing countries do – from a strictly neoclassical foundation. Further, I challenge a critical assumption behind neoliberal institutionalism by showing that trade liberalization results in suboptimal resource allocation from a global perspective. These findings have important implications for understanding how resources are allocated under laissez-faire policies, for understanding international debates over trade regimes, and for evaluating competing theories of international behavior.

The Foundations of Modern International Relations Theory

The contours of contemporary international political science took shape in the aftermath of the two World Wars — violent clashes pitting the most powerful countries on the globe against each other in bloody battles that remain unsurpassed in terms of the number of human lives lost. Not surprisingly, the field's agenda has been dominated by the desire to avoid a third such confrontation.

Quite surprisingly, international relations theory came full circle in the past half-century, from optimism to pessimism and back again. The interwar optimism concerning the prospects for world peace was based on the belief that no country would be tempted to wage war when World War I remained a fresh reminder of how destructive armed conflict might be to the community of nations as a whole: Wilsonian idealism was predicated first upon a failure to recognize that countries such as Germany, Italy and Japan might be able to improve their individual lots if victorious in war regardless of any collective interest in peace; and second, upon misplaced faith in the influence of international institutions such as the League of Nations.

World War II was only the final stunning piece of counterevidence in a series of international events that underscored the fallacy of such beliefs; the tide of international opinion reversed so dramatically that the new pessimism was termed “realism.”

International relations theory became dominated by the cynical certainty that conflict was inevitable among sovereign nations subject to no central authority; indeed, the pessimism was so powerful that the United States was quickly plunged into a lengthy standoff with a wartime ally for reasons that remain mysterious to this day.

Fifty years later, the Cold War had ended with the dissolution of the Soviet Union, the World Wars seemed a distant memory to many, economic issues ushered to the forefront of international relations, and the tide turned again. President Clinton described himself as “Neo-Wilsonian”⁴ and embraced multinational institutions, urging Congress to “renew America’s commitment to the International Monetary Fund” and “make good on our debt to the United Nations.”⁵ In his emphasis upon countries’ common goals, President Clinton seemed to parrot his predecessor, who called for “a new world order, where diverse nations are drawn together in a common cause to achieve the universal aspirations of mankind — peace and security, freedom, and the rule of law.”⁶ Their shared belief that multilateral institutions promote the interest of the world as a whole rather than merely the United States’ interest echoed the tenets of neoliberal institutionalism, which holds that the United Nations, the International Monetary Fund, the World Bank and the like induce international actors to forego their individual interests in favor of the collective good. While the new optimism is girded by impressive technological developments in both political science and economics, its theoretical foundation is precisely the same as that of Wilsonian idealism: neoliberal institutionalists argue that nations will cooperate to remove individual incentives to compete because trade wars and arms wars are counter to the collective

⁴ See Holmes Steven A. (1993) Choice for national security advisor has a long-awaited chance to lead. *New York Times*, January 3, 1993.

⁵ President William Clinton, “Address Before a Joint Session of Congress on the State of the Union,” January 27, 1998.

⁶ President George Bush, “Address Before a Joint Session of the Congress on the State of the Union,” January 29, 1991

interest in free trade and peace, and that international institutions are an effective means of inducing nations to forego their individual interests in favor of the collective good. Without any reference at all to contemporary politics, one might wonder at the resuscitation of the logic that was so catastrophically belied by World War II.

The disagreements between idealists and realists, between realists and neoliberal institutionalists, and between globalization's proponents and its critics all turn, I will argue, on differing constructions of "interest" – in particular, on a conflation of the common interest and the collective interest. Since the distinctions between the "collective interest," "common interest" and "individual interest" are central to both parts of my argument, and are frequently muddled in both the political science and economics literatures, an illustrative aside may be in order.

Suppose that Donald Trump, Mother Teresa and I are all rational expected value maximizers and are presented with two possible ways of splitting monetary pools of different sizes, as in Table 1.

Pursuit of our "individual interest" means that we will each prefer the arrangement that affords each of us the largest winning: Donald Trump will prefer Arrangement A while Mother Teresa and I will prefer Arrangement B. Additionally, Mother Teresa and I are said to have a "common interest" in Arrangement B.

Foregoing individual interests in favor of the "collective interest" (or "collective good") means maximizing the winnings of the group as a whole — in this case, we would all choose Arrangement A, in which the total winnings are \$5,000,002 rather than the \$3000 afforded by Arrangement B.

As a further aside, those acquainted with social welfare theory will recognize that while both arrangements are Pareto-optimal, only Arrangement A satisfies the Kaldor-Hicks criterion of social welfare: Donald Trump could compensate Mother

Table I.1: Illustration of Individual and Collective Interest

	<i>Arrangement</i>	
	A	B
Donald Trump	\$5,000,000	\$1000
Mother Teresa	\$1	\$1000
Me	\$1	\$1000
Total	\$5,000,002	\$3000

Teresa and me so that all three of us are better off than we would be under Arrangement B. If unmoved by my carefully contrived example, consider the advice of Nobel laureate Amartya Sen, who has suggested that compensation approaches are “*either unconvincing or redundant...* If compensations are not actually paid, then it is not obvious why this should be seen as an improvement” — i.e., the Kaldor-Hicks criterion is unconvincing as a standard for improved social welfare. If, on the other hand, compensations are paid, then “the change *along with the compensation* is simply a Pareto-improvement” — i.e., Kaldor-Hicks is redundant. (Sen, 1986:5) This sort of objection to standard welfare theory has formed the basis for Sen’s extensive efforts toward developing criteria for social welfare that go beyond summing net benefits.

John Rawls assails traditional social welfare theory for the same reason I will challenge neoliberal institutionalism: it is irrational for individuals to choose the collective interest over their individual interest. Beginning with the assumption that one criterion for a just social contract is that all parties would choose it in the absence of any information about their initial positions, Rawls notes

Offhand it hardly seems likely that persons who view themselves as equals, entitled to press their claims upon one another, would agree to a principle which may require lesser life prospects for some simply for the sake of a greater sum of advantages enjoyed by others. Since each desires to protect

his interests, his capacity to advance his conception of the good. no one has a reason to acquiesce in an enduring loss for himself in order to bring about a greater net balance of satisfaction. In the absence of strong and benevolent impulses, a rational man would not accept a basic structure merely because it maximized the algebraic sum of advantages irrespective of its permanent effects on his own basic rights and interests. (Rawls, 1971:14)

Rethinking International Relations Theory

It was precisely this line of thought that formed the basis of Edward Hallett Carr's critique of American foreign policy under Woodrow Wilson; Wilson, Carr argued, was banking on international leaders' willingness to sacrifice the national interest of each of their countries for the collective interest of the community of nations as a whole. As Wilson's faith in the efficacy of international institutions was based on the same sort of logic that underpins contemporary neoliberal thought, a review of its foundations and Carr's critique is in order.

From Utopianism to Neoliberal Institutionalism

Wilsonian Idealism and Carr's Critique

Political thought in the years between the two World Wars was dominated by Wilsonian idealism. Liberal democratic theory underpinned President Wilson's faith in the power of a multinational deliberative institution to resolve international disputes peaceably. "One country, one vote" was established as the norm for decision-making in his League of Nations, and Wilson preached at every opportunity that enlightened men institutionally empowered to discuss their disputes openly would be convinced by the force of reason to do what they should do rather than what they

wanted to do – that is, to forego their individual interests for a moral good arbitrarily identified as the interest of the community as a whole.⁷ The avoidance of war in particular was held to be in the collective interest, and signatories to the Covenant of the League of Nations agreed to police themselves by providing a united front against any country that (presumably due to muddled thinking, incorrigible evilness or hapless retrogression⁸) attempted to violate the community norm against waging war.

To President Wilson's embarrassment, the United States Senate provided an early indication of just how utopian such thinking was by refusing to ratify the Treaty of Versailles. Having established in World War I that it was the most powerful country in the world, the United States refused to relinquish its newly won place at the top of the international pecking order by consenting to submit to the authority of international opinion. By dint of its stature, the United States already had much greater influence over international affairs than a single vote in the League of Nations could confer. Wilsonian idealism was critically flawed first by its failure to recognize the primacy of power.

More critically, Wilsonian idealism erroneously presumed a harmony of interests surrounding the desire for peace. In his brilliant treatise published shortly before the outbreak of World War II, Edward Carr decried the tendency of American and British leaders in particular to assume that their aversion to another war was shared by the community of nations as a whole. In part, he argued, intellectual leaders simply failed to recognize that the individual interest of any country might not be identical to the obvious collective interest in avoiding bloodshed and destruction because gains and losses might be distributed unevenly:

It was easy after 1918 to convince that part of mankind which lives in

⁷ This standard may be so strongly socialized that alternatives — such as maximizing the welfare of the most disadvantaged member — may be difficult to imagine.

⁸ See Carr, 1939:38-39 for a catalogue of comments along these lines from leading thinkers of the time.

English-speaking countries that war profits nobody. The argument did not seem particularly convincing to Germans, who had profited largely from the wars of 1866 and 1870, and attributed their more recent sufferings, not to the war of 1914, but to the fact that they had lost it; or to Italians, who blamed not the war, but the treachery of allies who defrauded them in the peace settlement; or to Poles or Czecho-Slovaks who, far from deploring the war, owed their national existence to it, or to Frenchmen, who could not unreservedly regret a war which had restored Alsace-Lorraine to France; or to people of other nationalities who remembered profitable wars waged by Great Britain and the United States in the past. (Carr, 1964:51-52)

But also, Carr argued, idealists' faith that all countries shared an aversion to war was predicated on a failure to recognize the "all other things equal" nature of the aversion: "The common interest in peace masks the fact that some nations desire to maintain the *status quo* without having to fight for it, and others to change the *status quo* without having to fight in order to do so." (Carr, 1939:52-53)

Indeed, the Covenant was kept only when it served nations' interests to do so. The United States refused to sign at all. Italy invaded Ethiopia in 1935, eliciting only toothless economic sanctions⁹ from the signers who had pledged to mobilize against unprovoked aggression; the norm of collective security was defended only when doing so was costless. Japan withdrew in 1933 to indulge its expansion into Manchuria and China. Germany withdrew in 1933, sent troops into the Rhineland in 1936, and formed the Rome-Berlin Axis with Italy in 1938 to provide military support for General Francisco Franco in the Spanish Civil War. Russia was expelled early in 1939 for invading Finland. It was obvious long before World War II began with Germany's invasion of Poland in September of 1939 that the Covenant was readily ignored when honoring it was at odds with nations' individual interests; the institutionalization of norms against aggression provided no guarantee of peace. International behavior was inconsistent with utopian advice about how countries *should* behave. Carr exhorted

⁹ The sanctions excluded oil, iron and steel because including them would be costly to the countries imposing the sanctions.

students of international relations to adopt his “realism” based on the notion that countries are rational actors: power and interest are the keys to understanding international relations. His greatest influence, though, may have been his plea for a positive, rather than normative, theory of international relations.

Morgenthau and Modern Realism

Hans Morgenthau answered Carr’s appeal for a behavioral theory of international relations with a self-conscious attempt to purge Carr’s theory of its unobservable elements, and it was Morgenthau’s brand of realism that was to capture the imagination of the bulk of the international relations community and to become the foundation of modern realism. While Carr had argued that power and interest — not Wilsonian moralism — were the keys to understanding international relations. Morgenthau forwarded the *a priori* claim that the national interest of all states *is* power; he rejected out of hand Carr’s preoccupation with idiosyncratic and situational individual interests. In part, this was an explicit attempt to respect the artificial boundaries consistent with those of the academic disciplines: Morgenthau built his framework around power because he believed that attention to power distinguished the study of politics from the study of economics, ethics and religion in a way that attention to interests could not.¹⁰ But more than that, assuming that the international interest of all states is power and domination was a means of sidestepping complexities entailed with a careful consideration of interests, as military power was believed to be roughly observable — and therefore a suitable construct for behavioral research — in

¹⁰ “The main signpost that helps political realism to find its way through the landscape of international politics is the concept of interest defined in terms of power. This concept provides the link between reason trying to understand international politics and the facts to be understood. It sets politics as an independent sphere of action and understanding apart from other spheres, such as economics, ethics, aesthetics, or religion. Without such a concept a theory of politics, international or domestic, would be altogether impossible, for without it we could not distinguish between political and nonpolitical facts...” (Morgenthau, 1948/1954:5.)

a way that interest was not. Indeed, Morgenthau's discussion of interest in the opening chapter of his classic work is enlightening mostly because it reveals how murky the very concept of "interest" was for many writers of the time: his analysis veers from interest as preferred outcome, to interest as statesmen's intentions, to interest as statesmen's stated intentions, to interest as the moral goodness of statesmen's aims.¹¹

However questionable Morgenthau's equation of interest and power may have been, it led to an appealingly simple world view. Power and domination, after all, are relational concepts: one country is only as strong as another is weak; one country dominates only if another submits. If each country's national interest is identically power, then, international behavior occurs in a setting where there is a pure conflict of interest between all actors.¹²

Morgenthau's conflation of interest and offensive capability may have been troubling, but it was not necessary to his conclusion. Other writers¹³ forwarded the more explicitly Hobbesian view that the inevitability of international conflict arises from the defensive interests of states¹⁴ in an anarchical world system.¹⁵ The problem was

¹¹ See especially the discussion in Morgenthau, 1948/1954:4-6.

¹² By "conflict of interest" I mean "the state of incompatibility of the goals of two or more actors." (Axelrod, 1970:10) There is a good discussion in Axelrod, 1970 (pp 10-15) of the distinction between conflicting goals and what Axelrod terms "conflictful behavior," a distinction often lost in the academic literature.

¹³ See, for example, Herz (1959) and Jervis (1976).

¹⁴ This strain of realism has since been labeled "defensive positionalism." (Grieco, 1988)

¹⁵ Indeed, the presumption that the absence of any sort of central authority predisposes the international system to conflict and war is so pervasive that the central question in international relations is frequently posed as "Is cooperation possible in a world without central authority?" The question is sensible only if one makes very narrow assumptions about the role of the state — in particular, that the state behaves as an independent arbiter. Charles Lindblom phrased an objection this way:

To Thomas Hobbes we owe some confusion on the relation of politics to economics. Since the *Leviathan*, the study of politics has been largely the study of conflict and its resolution. But government is not merely or primarily a conflict resolver. And when it does attend to conflict, it is not conflict, as Hobbes saw it, over land, wives and cattle. It is conflict over the control of government itself, over the terms of man's cooperation in government, and over the purposes of that cooperation. (Lindblom, 1977:8)

stated succinctly by Raymond Aron:

But so long as humanity has not achieved unification into a universal state, an *essential* difference will exist between internal politics and foreign politics. The former tends to reserve the monopoly on violence to those wielding legitimate authority, the latter accepts the plurality of centers of armed force. Politics, insofar as it concerns the internal organization of collectivities, has for its immanent goal the subordination of men to the rule of law. Politics, insofar as it concerns relations among states, seems to signify — in both ideal and objective terms — simply the survival of states confronting a potential threat created by the existence of other states. (Aron, 1966:6)

States concerned with survival and uncertain of the intentions of other states must arm, then, but in so doing they threaten the security of the other states who cannot be certain that their arms will be used only defensively, a dynamic referred to as the security dilemma.

Interdependence Theory and Other Developments

At the same time that scholars concerned with security issues had become convinced that international conflict was inevitable in a system without central authority, an “interdependence” school was forming around the recognition that all international interactions are not directly security-related, not clearly zero-sum and not always conducted by official representatives of the state. Institutions such as the GATT and the International Monetary Fund (IMF) were credited with promoting an international order conducive to freer international movement of goods and capital, and in fact, the postwar growth in world trade has outstripped growth in world production by a factor of two. Moreover, the growth of foreign direct investment and the internationalization of production that accompanied the proliferation of multinational corporations (MNC’s) meant both that foreign non-state actors were highly sensitive to policies in

It is puzzling that we perpetuate this confusion today while working in close proximity to colleagues who study things like “representation,” “interest group influence” and “mass-elite linkages.”

other countries and that policymakers had incentives to woo foreign as well as domestic constituencies. And the number of international non-governmental organizations grew from about 330 in 1914 to almost 6000 by 1980. (Jacobson, 1984:10) This marked the beginning of a tendency among many international relations theorists to argue that relations in the economic and security realms were best understood by different intellectual frameworks: apparent inconsistencies between the realists and the interdependence school theorists were resolved by the suggestion that the security realm is inherently conflictual in a way that the economic realm is not, a strain of thought which persists in some of the contemporary literature.

Such a resolution is unsatisfactory for two sets of reasons. First, it is not clear that the two issue areas are so neatly separable. Deepening economic ties may have security implications: writers such as Rosecrance have repeated Montesquieu's advice that strong commercial ties between nations increase the costs of war to trading partners¹⁶; an important motivation behind the exchange programs sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO) was the hypothesis that increasing contact between citizens of different countries would erode domestic support for war between them; interdependence theorists are wont to suggest that the formation of the European Coal and Steel Community (ECSC) effectively precluded war between longtime enemies France and Germany because neither could independently produce enough steel to mount a military campaign against the other.¹⁷ Choucri and North, Lenin and Hobson¹⁸ underscored the fact that many

¹⁶ Rosecrance, 1986; Montesquieu, 1748/1989: 338. The argument that strong commercial ties might soften the political antagonisms between Britain and France is frequently cited as an important motivation behind the Cobden-Chevalier Commercial Treaty of 1860; see Iliasu (1975), Ratcliffe (1975) and Ratcliffe (1973). Cobden's ulterior motive was stated quite explicitly: see Hobson, 1919:244.

¹⁷ The suggestion that a mutual disinterest in fighting each other was requisite to the formation of the ECSC.

¹⁸ See Choucri and North, 1975; Lenin, 1939; Hobson, 1965.

wars are fought for economic reasons such as access to resources or markets. A.F.K. Organski. Charles Kindleberger and Klaus Knorr¹⁹ have made compelling cases for the importance of economic strength to military power.²⁰

Second, the suggestion that security issues are inherently conflictual while economic issues are inherently harmonious does not bear scrutiny. The writer most frequently cited in support of this view, Charles Lipson, has noted that potential sources of harmony exist in the security realm:

Yet it is seriously misleading to assume that security issues do not present the opportunity for significant joint gains, or at least the prevention of joint losses. Even adversaries like the United States and the Soviet Union wish to avoid nuclear war. And both could profit from restraints on arms racing: limits on the number of launchers and warheads, reduction of conventional forces in Europe, and so forth. (Lipson, 1984:13)

He might also, however, have qualified the common wisdom that “economic games often involve relatively simple coordination or mutually beneficial exchange.” (Lipson, 1984:12) While it is often true that economic agents have a mutual interest in reaching a deal, they frequently have a direct conflict of interest over the terms of the deal: buyers prefer low prices while sellers prefer high prices; borrowers prefer low interest rates, lenders prefer that rates be high; and one need not be a committed Marxist to acknowledge that workers prefer high wages while employers prefer to keep them low. Indeed, Adam Smith argued that these conflicting interests are a critical part of the “invisible hand” that promotes economic efficiency.

¹⁹ Organski, 1958; Kindleberger, 1970; Knorr, 1973.

²⁰ More recently, several writers have examined the relevance of military alliances to trade arrangements. See, for example, Gowa and Mansfield, 1993; Gowa, 1994; Pollins, 1989a, 1989b; Morrow, Siverson and Tabares, 1999a, 1999b.

Game Theory and International Relations Theory

Objections to the argument that security issues are inherently conflictual while economic issues are inherently harmonious highlight a problem central to both Morgenthau-school realism and to interdependence theory: the poles of pure conflict and pure harmony are sloppy characterizations of international relations in either realm; it is not surprising that neither is consistent with the historical record where harmony and discord wax and wane. Fortunately, technological developments facilitated more sophisticated thinking about the nature of harmony and conflict. The introduction of game theoretic models into the international relations literature provided a simple means of representing situations in which actors' interests are characterized neither by pure conflict or pure harmony. The prisoner's dilemma (PD) game in particular became a prevalent metaphor for situations in which countries could both gain from cooperating but fail to do so for fear of being exploited, as it provides a simple representation of one type of situation in which actors' interests are neither purely conflictual nor purely harmonious.²¹ On the one hand, two nations may have the incompatible aims of being militarily superior to the other. On the other hand, if both pursue those aims they will find themselves in an arms race that both would prefer to avoid. Moreover, because its focus is on the tension between actors' individual interests — in this case, nations' desires to arm themselves in order to maintain their external security — and the collective interest — here, avoiding costly arms races — it is an apt metaphor for many collective action problems of interest to social scientists. Whether or not international market liberalization should be included among these is a central theme in this volume.

For international relations theorists in general and realists in particular, the PD game introduced another way of thinking about the implications of international

²¹ See the appendix to this chapter.

anarchy. Without a formal central authority to enforce agreements, nations could not commit to the cooperative choice in PD without fear of being exploited. PD was thus adopted as a powerful metaphor for the predisposition of international actors toward mutually destructive behavior.

Neoliberal Institutionalism

Foundations of Neoliberal Institutionalism

That pessimism evaporated in the early 1980s as Robert Axelrod began publishing papers that were to culminate in his *Evolution of Cooperation*. Axelrod began by asking “when should a person cooperate, and when should a person be selfish, in an ongoing interaction with another person?” or alternatively, “Under what conditions will cooperation emerge in a world of egoists without central authority?” (Axelrod, 1984:vii; Axelrod, 1984:3) Rather than relying solely on the mathematical proofs characteristic of most formal game theory, he provided simulation evidence in the form of computer tournament results. Contestants played iterated PD; each participant submitted a computer program representing a strategy for making a series of choices about whether to cooperate with or defect against another player in a PD setting. The points awarded to each player following each choice reflected the payoff structure of PD. Each program was pitted against each other program for a lengthy series of PD choices. Scores were totalled for each pairwise match and then for each strategy as a whole by adding up all the scores achieved in the tournament. Results were publicized, and a second, much larger tournament was held following essentially the same rules.²²

²² An important exception: in the first computer tournament, each game was a series of 200 PDs; in the second computer tournament, the length of the game was variable and determined randomly.

The program that won both tournaments utilized a very simple strategy of reciprocity, Tit for Tat (TFT): cooperate if the other player cooperated on the previous move, defect if the other player defected.²³ More important, despite the fact that the immediate incentive in PD is to defect, many of the interactions — and, not surprisingly, all of those in which players achieved high scores — included lengthy stretches of mutual cooperation. The key to this result was the “shadow of the future.” Cooperation emerged when players were placed in situations in which they had a long future of PD interactions before them and placed sufficient value on the outcomes of the future interactions. This striking contradiction of earlier expectations of actors’ behavior in PD settings provided the impetus for a new strain of thought in international relations theory, neoliberal institutionalism.

Axelrod went further by outlining advice to participants and reformers. To increase the likelihood of mutual cooperation in an iterated prisoner’s dilemma setting, he advised that reformers attempt to enlarge the shadow of the future by making interactions more durable and/or more frequent — for example, by breaking issues under negotiation into smaller pieces — and by changing the payoffs faced by the players — for example, by government intervention. In a later article, Axelrod and Keohane took still a further step. They suggested not only that institutions and regimes might serve to change the international context in a way that could increase the likelihood of international cooperation, but also that actors involved in situations analogous to iterated prisoner’s dilemma might actively seek to do this:

Another way to facilitate cooperation is to establish international regimes. Regimes can be defined as “sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations.” International regimes have been extensive in the post-1945 international political economy, as illustrated by the international trade regime (centered on the GATT) and the international monetary regime (including the I.M.F. as well as other

²³ TFT also includes cooperating on the first move.

organizations and networks...)

International regimes do not substitute for reciprocity; rather, they reinforce and institutionalize it. (Axelrod and Keohane, 1985: 249-250)

This is the logic that lies at the core of neoliberal institutionalism: cooperation in situations aptly modeled by iterated prisoner's dilemma can be achieved in highly institutionalized settings, because institutions can serve as means of providing information, reducing transaction costs, and altering the payoffs associated with cooperation. Moreover, many neoliberal institutionalists argue that international actors should promote institutionalization as a means of promoting the collective interest in international stability.

Neoliberal institutionalism differs from Morgenthau-style realism, then, in three fundamental ways. First, Morgenthau and his strict adherents assumed an identification between power and interest that neoliberal institutionalists correctly rejected: clearly nation-states have interests apart from security concerns. Second, because power is a relational concept, if it is the driving interest behind international behavior, actors must be concerned with the distribution of any gains: an absolute gain smaller than the absolute gain accruing to a rival means that the power differential between the two has changed in the rival's favor. Realists, then, believe that international actors are concerned with relative gains, while neoliberal institutionalism is based on the premise that only absolute gains matter.²⁴

²⁴ The debate in the modern political economy literature over whether actors are concerned with absolute gains or relative gains appears at least as early as 1975, when Robert Gilpin cited it as a fundamental difference between economic thought and political thought. (Gilpin, 1975:33-38. Gilpin credits Rousseau for the observation that the relativity of power necessarily leads to a concern for relative gains.)

The debate has since been revived as a key point of difference between liberals and mercantilists (Stein, 1984:384) and more famously as the divide between neoliberal institutionalists and realists (Grieco, 1988). Curiously, Stein describes both sides of the debate as being compatible with realism. For protracted scrutiny of the relevance of the absolute vs. relative gains argument to neoliberal institutionalism and realism, see Snidal, 1991; Powell, 1991; Grieco, 1993; Powell, 1993; and Snidal, 1993.

The third important difference concerns the role of international institutions. Neoliberal institutionalists believe that international institutions are an important means of transcending nations' short-term individual interests in order to reach collectively preferred outcomes. Realists disagree. In John Mearsheimer's words, "Realists maintain that institutions are basically a reflection of the distribution of power in the world. They are based on the self-interested calculations of the great powers, and they have no independent effect on state behavior." (Mearsheimer, 1995a:7) Further, "The most powerful states in the system create and shape institutions so that they can maintain their share of world power, or even increase it." (Mearsheimer, 1995a:13)

Curiously little evidence has been adduced in support of neoliberal institutionalism. In a volume dedicated solely to that purpose, contributors found themselves unable to distinguish between a PD setting and a setting in which actors' goals were unambiguously compatible (Jervis, 1986), or illustrating the ways in which institutions might have made a difference if they existed (Van Evera, 1986; Conybeare, 1986), or noting how fleeting any real-life approximations to iterated PD might be (Downs, Rocke and Siverson, 1986; Oye, 1986b). Only Charles Lipson described a case in which extended cooperation was observed, and he was careful to note first that cooperative arrangements were reached by bankers privately by and large, in the absence of any institutional intervention or assistance (Lipson, 1986:205-206); and second, that in the rare cases in which international organizations intervened, they did so by increasing the costs to the least powerful players of resisting the dictates of the most powerful banks — that is, international institutions behaved in precisely the way that a realist would predict. Lisa Martin's careful analysis of EEC cooperation in imposing economic sanctions against Argentina during the Falkland Islands crisis is a rare case that neoliberal institutionalists cite as evidence that an institution did, once, help international actors to overcome collective action problems (Martin, 1992).

More generally, institutions such as the GATT and the IMF are cited as evidence that international institutions can help overcome resistance to trade liberalization without any careful analysis of whose interests might be served by such a goal.

Objections to Neoliberal Institutionalism

The harmony of interests revisited

Perhaps the paucity of empirical evidence for neoliberal institutionalism derives from its inherent illogic, for neoliberal institutionalism is based on a stunning contradiction of the rational choice theory in which the PD game is embedded: the rational actor will not promote institutions that foster the CC outcome, but rather, should selfishly promote those institutions that might facilitate her reaching the DC outcome. The optimism of the neoliberal institutionalists, then, is based on the the same logical fallacy as the optimism of Wilsonian idealism: implicit in both Axelrod's advice to participants and reformers and in later works which echo his exhortations is the assumption that actors will forego their individual interests in favor of the collective interest. There is not a rational basis, then, for suggesting that actors actively promote institutions as a means of changing their own incentives.

Indeed, neoliberal institutionalism is founded upon a failure to appreciate the extent to which Axelrod's landmark book broke with the rational choice tradition. Remember that he based his theory on computer simulations rather than analytical proofs demonstrating that a rational actor could expect higher returns from playing the TFT strategy. Not only did he not argue that there was a rational basis for pursuing a strategy of reciprocity, he proved that there could be no rational basis for preferring one strategy over another in a standard PD setting. Recall his Proposition 1: "If the discount parameter w is sufficiently high, there is no best strategy indepen-

dent of the strategy of the other player.” (Axelrod, 1984:15) Moreover, his empirical anecdotes deliberately established his departure from strategic rationality. Foresight was not necessary to the pattern of cooperation that he observed; indeed, he argued, the same patterns were characteristic of unthinking parasites and pathogens.

To note that it is irrational for actors to promote institutions that lead them to forego their own short-term interests is not the same as suggesting that institutions do not serve this function anyway; it is merely a contradiction of the claim that “institutionalist theory is utilitarian and rational.” (Keohane and Martin, 1995:39) To be logically complete, neoliberal institutionalism must include an explanation for why individuals might pursue a strategy of reciprocity and further, why they might foster institutions which commit themselves to doing this. Evidence of behavior consistent with neoliberal predictions would provide interesting evidence of the limits of strategic rationality as an explanation of international behavior.²⁵

Reciprocity and relative gains seeking

Identifying such evidence is trickier than it might appear, however. Preferences are not directly observable, so stories about the games that best represent a given situation necessarily involve some subjective interpretation and speculation. Because behavior is somewhat more observable, many neoliberal institutionalists reassure themselves with evidence that international actors do sometimes follow strategies of reciprocity, assuming that such descriptions do not involve subjective interpretation and speculation and are therefore incontrovertible evidence of the neoliberal position.

It is difficult, however, to distinguish such behavior from the relative-gains seeking behavior that a realist might believe is more likely. Reciprocity, after all, is one way of negating any relative gain an opponent might have achieved. The critical difference

²⁵ See Allison, 1971 for a careful presentation of alternative models.

between the two is that the actor pursuing a strategy of reciprocity will exact only enough retribution to restore the previous *status quo*, while a relative gains seeking actor will attempt to shift the balance to his advantage. Consider the statement of a soldier quoted by Axelrod in his description of cooperation between trench warfare combatants in World War I:

The real reason for the quietness of some sections of the line was that neither side had any intention of advancing in that particular district....If the British shelled the Germans, the Germans replied, and the damage was equal: if the Germans bombed an advanced piece of trench and killed five Englishmen, an answering fusillade killed five Germans. (Belton Cobb, 1916:74, cited in Axelrod, 1984:76)

The logic here is clear; had the responding side been seeking a relative gain, it would have responded with a more than commensurate attack.²⁶

Distinguishing between a proportional response and a gains-seeking response, however, is not always as straightforward as counting casualties or dollars. In his second volume detailing the progress of US-Soviet negotiations toward nuclear disarmament, Strobe Talbott explained the logic behind the SALT treaties this way:

Only up to a point, however, does SALT lend itself to comparisons to chess or poker or any other game. The defect of any such analogy is that

²⁶ A similarly clear proposal appeared recently in a discussion of the obstacles impeding philanthropy on the part of American billionaires. In an interview with *New York Times* columnist Maureen Dowd, Ted Turner discussed his anxiety over donating two hundred million dollars to charity: "My hand shook when I signed the papers because I knew I was taking myself out of the running for the richest man in America." He explained that he and fellow billionaires are generally reluctant to donate sizeable sums of money because in doing so, they might decrease their net worth to the extent that they would drop in their ranking on the Forbes Four Hundred list of wealthiest Americans. He advised further,

I talked to both Bill Gates and Warren Buffett, the two richest men in the country, and they would be inclined to give more if there was a list of who did the giving rather than the having. What difference does it make if you're worth twelve billion dollars or eleven billion dollars? With a billion dollars you can build a whole university.

They are fighting every year to be the richest man in the world. Why don't they sign a joint pact to each give away a billion and then move down the Forbes list equally? (Ted Turner, as quoted in Dowd, 1996.)

in these games, the object is victory. A chess player is trying to checkmate his opponent, a poker player to win the whole pot — a warrior to defeat his enemy. In SALT, however, the object has not been for one player to beat the other. While taking some pawns along the way perhaps limiting the freedom of movement of the other's queen, neither side has sought to check the other's king — that is, to imperil its self-perceived vital national interest. To play to win would be to seek “unilateral advantage” or “strategic superiority.” It would be to violate the rules of parity and stability. In SALT, the superpowers had been playing to a draw for nearly a year. But the game had been going on much longer. (Talbot, 1980:17-18)

Talbot's certainty that neither side was seeking a strategic advantage was clear to neither side, however; the history of the SALT negotiations is the history of disputes over the equivalence of various sets of proposed concessions. The same is true of every round of GATT negotiations. This is important for two reasons. First, to the extent that actors are unable to distinguish between reciprocal behavior and relative gains seeking behavior, they are confronted with the security dilemma central to realist thought. Second, neoliberal institutionalists who defend their perspective by citing examples in which actors appear to be pursuing TFT strategies need to establish the proportionality of the apparently reciprocal behavior.

Cooperation and collusion

A third problem with neoliberal institutionalism centers around conceptual problems with the definition of “cooperation.” Neoliberal institutionalists are very clear about the narrow definition they prefer:

“Cooperation” is a contested term. As I use it, it is sharply distinguished from both harmony and discord. When harmony prevails, actors' policies *automatically* facilitate the attainment of others' goals, and are not adjusted to make them more compatible. In both harmony and discord, neither actor has an incentive to change his or her behavior. Cooperation, however, “requires that the actions of separate individuals or organizations — which are not in pre-existent harmony — be brought into conformity with one another through a process of policy coordination.”

(Keohane, 1984:51) This means that when cooperation takes place, each party changes his or her behavior *contingent* on changes in the other's behavior.²⁷ (Keohane, 1988: 380)

At the same time, however, many do not seem to have understood a recurring warning in Axelrod's work:

Usually one thinks of cooperation as a good thing. This is the natural approach when one takes the perspective of the players themselves. After all, mutual cooperation is good for both players in a Prisoner's Dilemma... Yet, as previously suggested, there are situations in which one wants to do just the opposite. To prevent businesses from fixing prices, or to prevent potential enemies from coordinating their actions, one would want to turn the approach around and do the opposite of what would promote cooperation. (Axelrod, 1984:125)

Cooperation, after all, may take such diverse forms as honor among thieves, or successful cartelization, or redlining in housing markets. The critical issue in these cases is that cooperation between one pair of actors may be at the expense of one or more third parties. Consider Martin's paper, in which she carefully details the interests and negotiations leading to the cooperation of EEC countries in imposing economic sanctions against Argentina prior to the Falkland Islands War (Martin, 1992). What she describes as cooperation between EEC countries was clearly hostile behavior *vis à vis* Argentina. Or consider former U.S. President Bush's roseate vision of a brand new era in international cooperation:

We stand today at a unique and extraordinary moment. The crisis in the Persian Gulf, as grave as it is, also offers a rare opportunity to move toward an historic period of cooperation. Out of these troubled times, our fifth objective — a new world order — can emerge: a new era — freer from the threat of terror, stronger in the pursuit of justice, and more secure in the quest for peace. An era in which the nations of the world, East and West, North and South, can prosper and live in harmony. A hundred generations have searched for this elusive path to peace, while a thousand wars raged across the span of human endeavor. Today that new

²⁷ See also Oye, 1986a:5

world is struggling to be born, a world quite different from the one we've known. A world where the rule of law supplants the rule of the jungle. A world in which nations recognize the shared responsibility for freedom and justice. A world where the strong respect the rights of the weak. (Bush, 1990)

This promise of a new world order was, in fact, the justification for the strongest country in the world to solicit the cooperation of its allies in waging, by President Bush's count, the 1001st war in the history of mankind, a war against a much weaker adversary.

Only by selective attention to circumstances can such cases be classified as "co-operative." This dark side of neoliberal institutionalism — its failure to draw a distinction between harmless cooperation and exploitative collusion — is not merely an exception to the optimism typically associated with the perspective. To credibly contradict realist thought, one needs to be able to distinguish between, for example, EEC cooperation in opposition to Argentina, and Axis power cooperation in World War II.

Beyond Neoliberal Institutionalism

Back to Basics: Power and Interest

It is to Carr's credit that in his work that preceded both modern realism and neoliberal institutionalism, he introduced a framework that addresses the weaknesses of both. Modern realism errs in its identification of state interests with power. By refusing to presume that interests might be so narrow, Carr's strategic rationality can account for cases of convergent interests noted by interdependence theorists but antithetic to modern realism.

While more careful consideration of interests is the antidote to modern realism,

more careful consideration of power provides an antidote to neoliberal institutionalism. The central tenet of neoliberal institutionalism is based on assumptions about how actors might attempt to change the game they find themselves in. More specifically, neoliberal institutionalists argue that actors promote institutions as a means of helping them achieve the outcomes of mutual cooperation. Consideration of power permits us to restate the problem in a way that sidesteps the illogic of the neoliberal perspective: when will nations promote institutions that help them reach the mutually cooperative outcome? A simple answer is that nations will promote institutions that allow them to achieve the exploitative payoff when they have the power to do so, and bind all actors to the cooperative strategy in cases where they are not sufficiently powerful to tilt the board in their favor. Put another way, one might expect countries to promote institutions that allow them to exploit much weaker countries but avoid exploitation by countries more closely equal in power.

Cooperation, Collusion, Coercion, and the Post-War International Economic Institutions

The politics surrounding the emergence of the post-war international economic institutions are consistent with this interpretation. Their history is characterized by vigorous battles over conditionality, in the case of the IMF and the World Bank, and over the Most Favored Nation (MFN) clause, the norm of reciprocity, and the structure of tariff cuts in the case of the GATT/WTO. In all three cases, the primary divide has been between the most powerful countries in the system and the least powerful, and the positions adopted have been those of the former.

Consider first the IMF. Disputes over the rules governing access to its funds began even before its inception. In meetings preceding the Bretton Woods conference, the United States pushed for alternate wording of Article V of the original Fund agreement, in a unilateral effort to give the Fund discretion over filling members' requests to purchase currencies from the Fund. The war-weakened European countries objected

bitterly to the possibility of supranational influence on national economic policies, and, along with all other countries, sought to make withdrawals from the Fund a matter of entitlement. The U.S.'s defeat was to be temporary: "The Europeans had the best of the argument, perhaps, but it was the U.S. that had the resources, and it was resources that counted..." (Dell, 1981:8). The U.S. backed its challenges to requests by the Netherlands, Nicaragua and South Africa with threats of withdrawing its support, and in February of 1952, the other Fund members conceded in order to preserve the financial viability of the Fund. Conditions and limitations expanded through the 1950's, and the Fund's Articles of Agreement were officially amended in July of 1969. The scarcity of low-conditionality IMF loans became a particular source of contention through the 1970's, when LDCs suffered disproportionately from the oil crisis. Ironically, though, the same European countries that had so bitterly opposed conditionality when facing balance of payments pressures after World War II echoed the U.S.'s insistence that IMF funding be conditional on adherence to increasing economic openness. A noted economic historian remarks upon

... the startling similarity between the views held today by developing country members of the Fund and the views that were being vigorously advocated by the Europeans at a time when they, too, had to face major balance-of-payments pressures of a structural character. If the monetary authorities of countries such as France, the Netherlands, and the United Kingdom would like to gain a better understanding of the current insistence by developing countries on the need for access to a larger volume of unconditional resources, they have only to look back at their own files and position papers of the early postwar period. (Dell, 1981:14-15)

As in the case of the IMF, disputes between the powerful and the weak over the rules governing the GATT began long before it became an established institution. Born of U.S. policy proposals²⁸ proffered in the aftermath of World War II, the

²⁸ *Proposals for the Expansion of World Trade and Employment*, published in December 1945, and the *Suggested Charter for an International Trade Organization*, circulated to participants in the preparatory meeting preceding the Havana Conference of 1947-1948.

GATT was completed in October of 1947 with the aim of averting the tariff wars that characterized the post-World War I period, and that were believed to bear significant responsibility for the onset of the global depression. Two principles are central to the Agreement. First, through the Most Favored Nation (MFN) clause, signatories to the GATT are entitled to the lowest tariff rates each country has made available to any other country. Second, successive rounds of negotiations to further reduce tariff levels are based on the principle of reciprocity: each tariff reduced by one country is to be matched by an equivalent tariff concession by the other members.

On the surface, the MFN clause and reciprocal tariff reductions appear to be egalitarian means of achieving the tariff reductions that market liberals believe are critical to increasing trade between countries, thereby promoting economic efficiency. As in the case of arms accords, however, third world countries have argued that these central principles of the GATT affect all countries equally only if all countries are already equal. While the MFN clause may have prevented wealthy countries from giving special consideration to their allies, it also prevented them from giving special concessions to impoverished countries. And the principle of reciprocity meant that low tariff levels proffered to LDCs required LDCs to abandon protection of infant industries. Indeed, third-world objections that the “egalitarian” principles of the GATT would serve to freeze their second-class economic status into place began before its adoption, during deliberations of the preparatory committee:

Brazil, Cuba, and India... and other developing countries viewed the *Proposals* as motivated by a desire on the part of developed countries to keep them in dependence. India deemed the imposition of direct controls on foreign trade necessary for promoting rapid and large-scale industrialization. (Srinivasan, 1998:20)

The Latin American countries were putatively more extreme, advocating a regime characterized by a progressive redistribution of international wealth.

Not surprisingly, third world countries were underrepresented in the GATT.²⁹ Moreover, the tariff reductions negotiated did, indeed, reflect the interests of the developed world. In 1958, the GATT-commissioned Haberler report concluded that substantial barriers in the developed countries to goods exported by LDCs presented significant obstacles to the LDCs' participation in the world trading system. At approximately the same time, Raoul Prebisch was introducing persuasive arguments that even if all trade barriers were eradicated, LDCs' share of global income would worsen, rather than improve or remain static, by virtue of their slack labor markets and agricultural economies.³⁰

Mounting evidence of the regressive distributional effects of the GATT won the LDCs the set of amendments which were adopted in 1964 as Part IV of the agreement. This "Trade and Development" section, however, was largely symbolic. The GATT's central principles of MFN and reciprocity were not relaxed until LDCs were granted the Generalized System of Preferences (GSP) in the Tokyo Round concluded in 1979. Furthermore, the GATT did not include tariff reductions on goods of critical importance to LDCs — textiles, apparel and agricultural products — until the Uruguay Round, concluded in 1994.

It is no coincidence that this was both the first round of GATT negotiations that involved widespread participation on the part of the developing countries, and that it was the longest and most contentious of all GATT negotiations. In a critique that alternates between profound bitterness concerning the developed world's agenda and deep melancholy about the consequences for the developing countries, an Indian representative to the Uruguay Round explains its origins as an attempt to foist on

²⁹ Most of the 44 developing countries that were members of the GATT by 1965 were members not because they sought membership, but because membership was conferred upon them automatically (under Article XXVI(5c)) through sponsorship of their former colonial rulers. By and large, these countries did not participate in GATT negotiations until the Tokyo Round.

³⁰ Prebisch's arguments are discussed in more detail in Chapter 2.

the LDC's the costs of the developed world's unproductive investments:

Due to the constraints of a political and institutional nature – the compulsion to continue the arms race, unwillingness to bring about any change in the pattern of profligate consumption, rigidity of wage structures, the power of domestic lobbies, etc. — these countries, particularly the United States, were not in a position to carry out the structural changes in their economies which could have put them on a path of higher rates of growth. They, therefore, decided to resort to an external means as a substitute for domestic structural adjustment. (Dubey 1996:2)

Not only did the developed world pursue the strategy they so frequently accused developing countries of following, they used international institutions as a means of coercion:

The recurring balance-of-payments deficit and the declining competitiveness of the US economy was thought to be offset by a combination of coercive bilateral measures and a tailor-made new round of multilateral trade negotiations to create expanding space for US goods and services, particularly in the markets of the large size and newly industrializing developing countries. If Super and Special 301 provision of the US Trade and Competitiveness Act 1988 was, to borrow a phrase from Carla Hills, the then US Trade Representative, a crow bar [sic] to pry open the markets of developing countries, the new round of trade negotiations was designed to dismantle all the defences of these countries against the unrestricted entry of US goods and services in their markets. (Dubey, 1996:2-3)

The timing and circumstances were indeed fortuitous for U.S. interests. While third world bargaining power was greatly enhanced by the United States' desperation to solve its twin deficits problem by expanding exports, developing countries were divided by a combination of crosscutting interests and financial vulnerability. Several joined the U.S. in the CAIRNS Group of agricultural exporters pushing for liberalized trade in agriculture, and were reluctant to sacrifice possible gains in that arena by standing with the other LDCs on issues concerning developing countries more broadly. Others were reliant upon developed countries, the IMF and the World Bank for repeated debt rescheduling, and were wary of antagonizing their creditors. Lest there be any doubt of the U.S.'s willingness to exert bilateral pressure to force its desired

multilateral outcome, the United States bent the rules of its own 1988 Trade and Competitiveness Act so that it could cite its two most vocal LDC opponents, Brazil and India, under the Super 301 provision. While the original Super 301 statutory criteria called for focusing on trade practices that had the greatest potential impact on U.S. exports, “Generalized displeasure within the Administration concerning the allegedly uncooperative positions of Brazil and India in the ongoing Uruguay Round of multilateral negotiations played a role in their selection.” (Ahearn, Cronin and Storrs, 1990:1) Indeed, U.S. Trade Representative Carla Hills introduced support of the U.S.’s Uruguay Round initiatives as a new, explicit criterion for Super 301 action only in a Fact Sheet issued May 25, 1989 – the same day the Bush Administration cited Brazil and India for violations. In the words of a Congressional Research Services report,

...the U.S. concern with having the Super 301 process complement the Uruguay Round negotiations may have been more credible in foreign eyes if the selection of practices had been less parochial (i.e., if the U.S. had not emphasized products for which few countries besides the United States have internationally competitive industries). (Ahearn, Cronin and Storrs, 1990:19)

Over forty countries made statements condemning the U.S. action in a special June 1989 session of the GATT.

The outcome of the Uruguay Round was predictable. The biggest winner was the United States, which stood to benefit from liberalized trade in agriculture and services and from new agreements on intellectual property rights. The other developed countries similarly benefitted a great deal from the new initiatives concerning Trade-Related Investment Measures (TRIMs) and Trade-Related Intellectual Property Rights (TRIPs), but for European countries in particular, liberalized agricultural trade was a substantial concession. The more advanced LDCs will benefit from liberalized agricultural trade, but sacrificed a great deal in acceding to the developed world’s demands for TRIMs and TRIPs and in accepting a gradual phaseout of the

GSP. Sadly, but not surprisingly, the poorest countries of the world are the Uruguay Round's biggest losers. In 1994, the OECD estimated that net annual losses to Africa could be as large as \$2.6 billion by the year 2002.(OECD, 1994) In retrospect, this was an optimistic assessment. Selective compliance on the part of the developed world added staggering costs: Mike Moore, the director general of the WTO, estimates that continued agricultural subsidies paid by the U.S. and the European Union "cost the developing nations more than \$250 billion a year in lost markets."(quoted in Weiner, 2002: A4) It remains to be seen if the steady post-War decline in the third world share of international trade continues.

Conclusions

There is a growing consensus among academic economists that the failure of globalization to bring about anticipated benefits to the third world is due in part to its subversion by the more powerful developed countries. In Joseph Stiglitz's words, "...in my time at the White House as a member and then chairman of the Council of Economic Advisers..., and at the World Bank, I saw that decisions were often made because of ideology and politics. As a result many wrong-headed actions were taken, ones that did not solve the problem at hand but that fit with the interests or beliefs of the people in power." (Stiglitz, 2002:x) Less surprising than Stiglitz's lament that economists' concern for the collective interest is frequently overridden by political leaders' individual interests is the suggestion by many political scientists that it might be otherwise. The behavior of the developed world – its use of the postwar multilateral economic institutions to force developing countries to open their markets while protecting its own producers from competition – contradicts the neoliberal interpretation of the role of the international economic institutions, and provides support for the realist interpretation of international political behavior. It begs a second set of questions, though: if the powerful countries in the system were

not subverting the norms they purport to promote, would market liberalization bring about the promised benefits to the third world? And regardless of distributional considerations, are perfectly free markets in the collective interest? That is, do they indeed promote an allocation of resources that maximizes global output?

In the next chapter, I introduce the basis for the belief that perfectly free markets do serve this role, and discuss implications for political behavior that are inconsistent with contemporary politics.

CHAPTER II

ECONOMICS AND INTEREST

As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestick industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the publick interest, nor knows how much he is promoting it. By preferring the support of domestick 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 was no part of his intention. (Smith, 1776:IV.ii, p 456)

Almost two centuries before the Prisoners' Dilemma game became the ubiquitous metaphor for political scientists' concern that the pursuit of individual interest may lead to an unintended collective bad, the "dismal science" was buoyed by Adam Smith's explication of the invisible hand. In the case of markets, he argued, the pursuit of individual interest leads to an unintended collective good: the optimal allocation of resources. The obvious desirability of such an outcome has led many observers to think of *laissez-faire* capitalism as a politically neutral objective.

David Easton's widely embraced definition of political science is telling. "...Political science," he wrote, "[can] be described as the authoritative allocation of values for a society." (Easton, 1953:129) This characterization has been invoked subsequently to suggest that there is a clear distinction between authoritative allocation and market

allocation that can form the basis of a boundary between the disciplines of political science and economics.

This distinction is untenable as long as actors have economic interests and “interest” is one of the driving forces behind political behavior. Indeed, one need only turn an eye toward Eastern Europe and Asia to be reminded that decisions about whether goods should be allocated by markets or by political directive are themselves authoritative and intensely political in almost every way that we think of the word “political.” The market system is dependent upon a legal-institutional framework that establishes individuals’ rights to own property. Decisions about the extent to which states intervene in markets empower certain groups at the expense of others: Ricardo inveighed against the Corn Laws that were imposed in early nineteenth century Britain to protect the high profits earned by the landed aristocracy and borne by their nascent competition, urban capitalists; today we read of popular resentment of *businessmen* in the former Soviet Union and of concerns by Chinese central elites that unfettered capitalism in Hong Kong will afford a political edge to regional leaders.¹

Conflict between such actors is central to the formation of interest groups, political parties, competing political factions, coups and revolutions. Michael Manley’s decision to give the expansion of Jamaican social welfare programs priority over compliance with IMF liberalization imperatives cost his People’s National Party the Presidency in 1980. Lech Walesa’s faithful compliance with the IMF’s shock therapy program plunged Poland into such dire economic straits in the early 1990’s that the electorate voted the communists back into office. More recently, IMF-mandated austerity measures exacerbated dissatisfaction with Suharto in Indonesia, ending his thirty-two year rule, and with de la Rúa in Argentina, leading to the collapse of what was once one of the wealthiest countries in the world. The view that market liberal-

¹ See, for example, Bueno de Mesquita, Newman and Rabushka: 1985 and 1996.

ization is a politically neutral objective is founded in part on the same fallacy that is used to prop up neoliberal institutionalism: the confusion of the collective interest with the common interest.

Equally important, though, a new set of challenges to the assumptions underpinning the stories about exchange behavior that form the argument for *laissez-faire* capitalism are slowly seeping into the mainstream literature in the form of the “new institutional economics.” North and Thomas (1973) and North (1983) emphasize the role of politico-legal institutions in reducing transaction costs. Ross (1973) and Stiglitz (1974) discuss the role of incomplete information and information asymmetries. Several writers (Ray and Marvel, 1984; Nelson, 1989; Maxfield and Nolt, 1990; and Leamer, 1990, for example) discuss differences between developed and developing countries that render the former better able to profit by imposing tariffs than the developing countries are. Like these writers, I focus on institutional differences between developed and developing countries that affect the gains from trade, but I propose a mechanism involving currency pricing that operates even in perfectly free markets. The original motivation for this work was to demonstrate that the risk premiums attached to developing countries’ currencies put less-developed countries at a disadvantage in a *laissez-faire* international economic order, with the implication that third world and first world countries have opposing interests regarding international trade regimes. To my surprise, the analysis led to the conclusion that not only are perfectly free markets counter to the interest of LDC’s, they are not in the collective interest, either: they lead to a suboptimal allocation of resources from a global perspective when compared to an interventionist alternative.

A fair amount of economic theory is required to understand the mechanism, the connections between economic systems and political interests, and the differences between my analysis and previous critiques of modern trade theory. Accordingly, this chapter provides a review.

I begin with a brief chronicle of the historical context in which the classic works underpinning modern trade theory were written, a debate over who gained most from liberalized trade between Portugal and England in the early eighteenth century, and then turn to a review of the classics themselves. While the mathematical nuts and bolts of the price mechanism were assembled later by other writers, Adam Smith provided the conceptual beginnings in his *Wealth of Nations*. His standard of social welfare continues to guide mainstream economic thought, and for polemical purposes, it is the foundation for the analysis presented in later chapters. David Ricardo's theory of comparative advantage remains the linchpin of modern international trade theory; the complementary Heckscher-Ohlin theory and its corollaries, most notably the Factor Price Equalization and Stolper-Samuelson theorems, extend Ricardo's analysis in ways that have interesting implications for sub-national politics.

The inconsistency between the material interests suggested by the standard economic models and the political behavior of economic actors provides ample grounds for questioning the relevance of modern trade theory to the issues faced by developing countries in the contemporary world system. Moreover, the tension between the concerns of Portuguese leaders in the 17th and 18th centuries and free market advocates such as Smith and Ricardo is echoed in contemporary debate in the form of dependency theory, Raoul Prebisch's declining terms of trade analysis and the infant industry arguments that follow from the two strains of thought. They are reviewed here as an important piece of the rhetorical justification for the third world's demands for preferential treatment in international markets, and to clarify the distinction between those critiques and my own work.

Foundations of Modern Trade Theory

By the mid 1600's, Portugal was one hundred years past its "Marvelous Century" of Da Gama and Magellan and no longer a contender for European dominance. It

had, in fact, paid dearly for investing so much in overseas exploration and so little in domestic development. It was capable neither of providing for its own defense nor of producing its own food. It had slipped the collar of Spanish domination while Spain was distracted by a Catalan revolt, but the threat of reannexation by its neighbor to the east loomed large. To the west was a lengthy coastline it could not defend with a navy in ruins. Having relied so long upon imports from colonial possessions and its sea trade now under seige chiefly by the Dutch, it produced very little domestically. Despite its lengthy coastline, even its fishing industry was moribund; the Portuguese relied on imports of codfish from Newfoundland via England.²

England, in fact, was to become Portugal's largest trading partner and not coincidentally, a key ally. British merchants settled in the coastal cities of Lisbon and Oporto and supplied the Portuguese with basic foodstuffs and textiles in exchange for wine, figs, fruit, oil, sugar and most importantly, gold reexported from colonial Brazil.

It is here that the drama begins. The Anglo-Portuguese trade was to become a critical source of contention both between and within England and Portugal. In the late seventeenth century, the "Portuguese Colbert,"³ D. Luis de Meneses, third count of Ericeira, spearheaded plans to develop Portugal's domestic industry, largely in an attempt to stanch the flow of bullion to England. His efforts included various restrictions on the importation of foreign goods, including *pragmáticas* prohibiting Portuguese residents from wearing garments made of imported cloth. The Portuguese nobility became increasingly intolerant of the restrictions; denunciations of the domestic development programs grew rampant; and, despondent, Ericeira hurled himself from a window in the May of 1690 (on the feast of Corpus Christi) and died of mas-

² See, for example, Shaw, 1989:25; Shaw, 1989:52; Carnota, 1843a:114-118, chapters 12 and 15 *passim*.

³ See Hanson, 1981 for the moniker.

sive head injuries. In 1692, many of the prohibitions embodied in the *pragmáticas* were annulled; in 1703, England and Portugal signed the historic Methuen Treaty exchanging an English vow to keep tariffs on Portuguese wine low for a Portuguese promise to do the same for English cloth.

The Methuen Treaty provoked spirited debate between three leading thinkers of the time. Sebastião José de Carvalho é Melo, the Marquis of Pombal, anticipated by over two hundred years the concerns of modern dependency theorists, and has been relegated to a minor footnote in the history of political economy. Adam Smith's rejoinders to Pombal form critical sections of the chapters on international trade in *The Wealth of Nations*, which became the foundation of modern mainstream economic theory. Ricardo illustrated the principle of comparative advantage with a tongue-in-cheek analysis of the gains from the liberalized trade of Portuguese wine and English cloth in his *Principles of Political Economy*, which became the foundation of modern trade theory.

Power and trade: a preview of modern dependency theory

To the Marquis of Pombal, Portugal's finance minister from 1750 to 1777, the Methuen Treaty cemented a commercial relationship that was destroying Portugal by abetting the resistance of the nobility to the social transformation that was necessary for economic development but certain to undermine their preeminence. Indeed, their preeminence and their view of commerce as dirty business with which nobility ought not soil itself were in large part responsible for England's stranglehold on Portuguese markets. Most of the commerce within Portugal was conducted by British merchants who had settled in Lisbon and Oporto, and in Pombal's view, the exclusivity of their commercial rights enabled them to take far more than they were giving in return. In Pombal's words,

England had become mistress of the entire commerce of Portugal, and all

the trade of the country was carried on by her agents. The English were at the same time the furnishers and retailers of all the necessaries of life that the country required. Having a monopoly of everything, nothing was carried on but through their hands...

The English came to Lisbon to monopolize even the commerce of Brazil. The entire cargo of the vessels that were sent thither, and consequently the riches that were sent in exchange, belonged to them. Nothing was Portuguese but the name; whilst, in the midst of this apparent vast commerce, that appeared to enrich the country, the strength of Portugal was wasting away, because the English alone enjoyed the profit. These foreigners, after having acquired immense fortunes, disappeared on a sudden, carrying with them the riches of the country. (Carnota 1843a:114-115)

This illusory enrichment of Portugal was largely purchased on credit. Moreover, a substantial portion of the immediate remuneration was offered in the form of gold reexported from Brazil. By one account, from 1696 to 1726 alone “one hundred millions sterling entered her [Portugal’s] ports; yet in 1754 all the specie in the kingdom did not amount to a million, whilst the nation was burdened with a debt of three times that amount.” (Carnota, 1843a:211–212).

Pombal’s concern was not the standard mercantilist worry that exporting gold was by itself a security threat:

Without being a politician, it is sufficient to understand arithmetic, to show clearly that a state which directs its sole attention to mines must necessarily perish. Gold and silver are fictitious riches. These measures of value being but slowly destroyed, the more they are multiplied the less is their real value, because they represent fewer things. (Carnota, 1843a:122-123)

Rather, Pombal despaired of the confidence his countryfolk had placed in the value of the Brazilian mines:

All intelligent Portuguese admit that the acquisition of the South American colonies, and the discovery of the gold mines... proved the ruin of their country. For the incredible quantities of gold and silver that were imported from Brazil rendered the people unfit for the steady improvement and encouragement of their indigenous products, since the most enterprising and active abandoned their homes in the search after those rapidly accumulated fortunes, which the slow operations of continuous industry neither promised nor afforded. (Carnota, 1843b:31)

By 1754, indeed, the country was arguably in ruins. Gold production had dropped drastically, there was no domestic industry to speak of, and the navy consisted of only two ships. Portugal was entirely reliant upon England for its military defense and therefore forced, in Pombal's view, to honor the Methuen treaty that Pombal believed favored the English.

Adam Smith and the foundation of modern social welfare theory

Adam Smith disagreed. Indeed, in his classic *Wealth of Nations*, he opens his chapter "Of Treaties of Commerce" with a lengthy argument advising that the Methuen Treaty was, if unfair at all, unfavorably prejudicial against the English. He notes that the Treaty bound Portugal only to pre-prohibition tariff levels while obliging England to apply smaller tariffs to Portuguese goods than to goods of any other country; and that the protection afforded Portugal by England's commercial interest was an amenity not explicitly billed.

Like Pombal, Smith rejected the cachet assigned gold by mercantilists:

...Mr. Barette was informed that the weekly packet boat from Lisbon brings, one week with another, more than fifty thousand pounds in gold to England. The sum had probably been exaggerated...

Let us suppose, however, ... that it amounted to a still greater sum than Mr. Barette seems to imagine: this trade would not, upon that account, be more advantageous than any other in which, for the same value sent out, we received an equal value of consumable goods in return. (Smith, 1776, VI.vi:8-10, pp 547-548)

And Smith was unpersuaded by Pombal's advocacy for self-sufficiency. Rather, his exhortation toward an efficient division of labor was explicitly directed not only at domestic producers but also at those who would interfere with free international trade:

What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. 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, 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. (Smith, 1776:IV.ii., p. 457)

Both objections turn, in part, on Smith's standard of social welfare, a standard which continues to form the foundation of contemporary neoclassical economic thought.

Smith's standard for social welfare

Smith begins his analysis by discussing the distinction between the nominal and real price of any commodity. Like most writers of his time, his argument is based on the labor theory of value. "The value of any commodity... is equal to the quantity of labor which it enables him to purchase or command. Labour, therefore, is the real measure of the exchangeable value of all commodities."⁴ Labor also underpins real prices.

The real price of everything, what every thing really costs to the man who wants to acquire it, is the toil and trouble of acquiring it... They [money or

⁴ Smith, 1776:I.v., p. 47.

goods] contain the value of a certain quantity of labour which we exchange for what is supposed at the time to contain the value of an equal quantity. Labour was the very first price, the original purchase-money that was paid for all things. (Smith, 1776:I.v., pp. 47-48)

This real price of commodities is contrasted to the nominal price, or price in money. The latter, Smith argues, is confounded with the real prices of gold and silver, which are determined by how much labor is required to produce them — that is, “the fertility or barrenness of the mines.”⁵

The real price must resolve itself into some combination of three component prices, wages paid to workers, profits accruing to owners of any capital that was used in production, and rents paid to the landlords.⁶ The real value of these components, like the real value of the commodity itself, is determined by the labor embodied in them.⁷

In the absence of interference, Smith argues, market prices of commodities and the market rates of their components are driven to their real values (or “natural prices”) by the laws of supply and demand. If supply exceeds demand, one of the component prices must have fallen below its natural rate, and the component’s supplier (landlord, worker or owner of capital) will withdraw the component, leading to a reduction in supply. Similarly, if supply is too low, the price of at least one component must exceed its natural rate, prompting an increase in supply. The “natural price,” then, which is the sum of the component costs, is an equilibrium price effected by the laws

⁵ Smith, 1776:I.v., p.49

⁶ “But the whole price of any commodity must still finally resolve itself into some one or other, or all of those three parts; as whatever part of it remains after paying the rent of the land, and the price of the whole labour employed in raising, manufacturing, and bringing it to market, must necessarily be profit to somebody.” (Smith, 1776:I.vi, p. 69)

⁷ “The real value of all the different component parts of price, it must be observed, is measured by the quantity of labour which they can, each of them, purchase or command.” (Smith, 1776:I.vi, p. 67)

of supply and demand.⁸

The natural price is not only an equilibrium price; it is also a desirable price because it is the lowest price at which producers will still produce their goods. In the absence of intervention, then, markets are self-regulating in a way that affords the lowest possible prices of goods to consumers, and

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. The maxim is so perfectly self-evident, that it would be absurd to attempt to prove it. (Smith, 1776:IV.viii., p. 660).

Implicit in Smith's analysis, then, is the notion that social welfare is maximized when a market is producing as much consumer goods as possible given available resources; he pays no attention to the distribution of goods. Market liberalization is in the collective interest. Its benefit to individual traders is given by their voluntary participation; they are assumed to be following their self-interest.

Smith continues to note that market intervention is no more defensible in international contexts than it is in the case of domestic markets:

By means of glasses, hotbeds, and hotwalls, very good grapes can be raised in Scotland, and very good wine too can be made of them at about

⁸ "The quantity of every commodity brought to market naturally suits itself to the effectual demand..."

If at any time it exceeds the effectual demand, some of the component parts of its price must be paid below their natural rate. If it is rent, the interest of the landlords will prompt them to withdraw a part of their land; and if it is wages or profit, the interest of the labourers in the one case, and of the their employers in the other, will prompt them to withdraw a part of their labour or stock from this employment. The quantity brought to market will soon be no more than sufficient to supply the effectual demand. All the different parts of its price will rise to their natural rate, and the whole price to its natural price. If, on the contrary, the quantity brought to market should at any time fall short of the effectual demand, some of the component parts of its price must rise above their natural rate. If it is rent, the interest of all other landlords will naturally prompt them to prepare more land for the raising of this commodity; if it is wages or profit, the interest of all other labourers and dealers will soon prompt them to employ more labour and stock in preparing and bringing it to market. The quantity brought thither will soon be sufficient to supply the effectual demand. All the different parts of its price will soon sink to their natural rate, and the whole price to its natural price. The natural price, therefore, is, as it were, the central price, to which the prices of all commodities are continually gravitating. (Smith, 1776:I.vii., pp. 74-75)

thirty times the expence for which at least equally good can be brought from foreign countries. Would it be a reasonable law to prohibit the importation of all foreign wines, merely to encourage the making of claret and burgundy in Scotland? But if there would be a manifest absurdity in turning toward any employment, thirty times more of the capital and industry of the country, than would be necessary to purchase from foreign countries and equal quantity of the commodities wanted, there must be an absurdity, though not altogether so glaring, yet exactly of the same kind, in turning towards any such employment a thirtieth, or even a three hundredth part more of either. (Smith, 1776, IV.ii:15, p. 458)

Ricardo and the Law of Comparative Advantage

To David Ricardo, the Methuen Treaty was to provide the substantive context for the insight that has dominated international trade theory for the last century and a half. In his classic *The Principles of Political Economy and Taxation*, he argues that even if one country produces two goods less efficiently than the other, there is still a possibility for gains to both countries from trade in the two goods. A quick sketch of the reasoning behind his law of comparative advantage follows.

In the absence of trade, England and Portugal are assumed to produce wine and cloth. Portugal is able to produce both more cheaply than England is; the production of some arbitrary amount of wine requires the labor of 120 people for a year in England but only 80 people in Portugal, while the production of some arbitrary amount of cloth requires the labor of 100 people for a year in England but only 90 people in Portugal. (See Table II.1.)

For the sake of illustration, suppose that each country has a labor force of 7200 people. Then in the absence of trade, the possible combinations of maximal output — that is, the production possibility frontiers — for each country can be represented by the graphs in the top half of Figure II.1. We know, for example, that if Portugal allocates its entire labor force in a given year to the production of cloth, it can

Table II.1: An Illustration of Comparative Advantage: Labor Inputs for Two Countries and Two Goods

	Wine	Cloth
Portugal	80	90
England	120	100

produce $7200/90=80$ bolts of cloth. If, on the other hand, it devotes all of its labor to the production of wine, it can produce $7200/80=90$ pipes of wine. The production possibility frontier for England is derived the same way.

Assuming perfectly competitive economies, eight pipes of wine will trade for nine bolts of cloth in Portugal, while six pipes of wine will trade for only five bolts of cloth in England. Assuming also that inhabitants of both countries prefer a mix of the two goods to an equally affordable consumption bundle consisting of only one good or the other, each country will produce both goods, since in the absence of trade, each country must produce exactly what its inhabitants consume.⁹

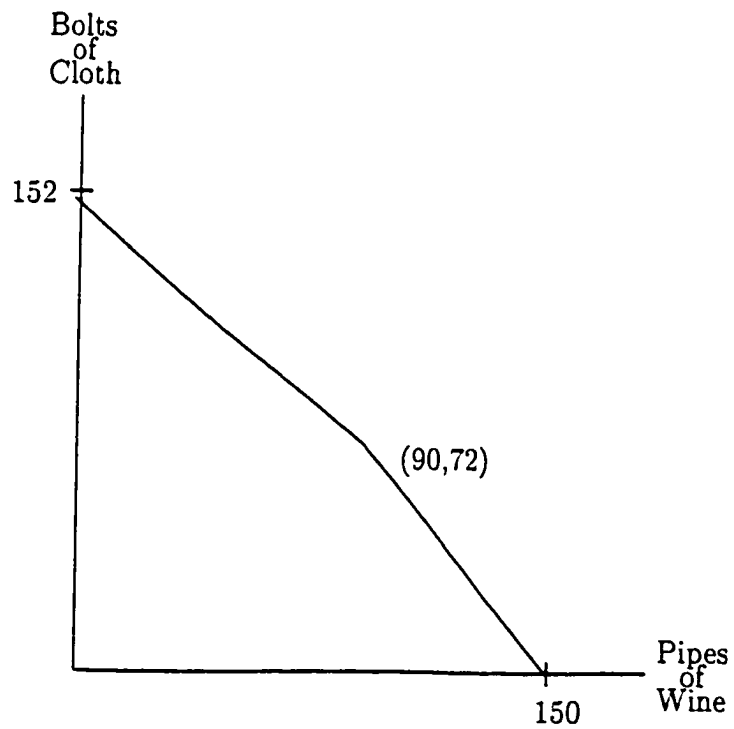
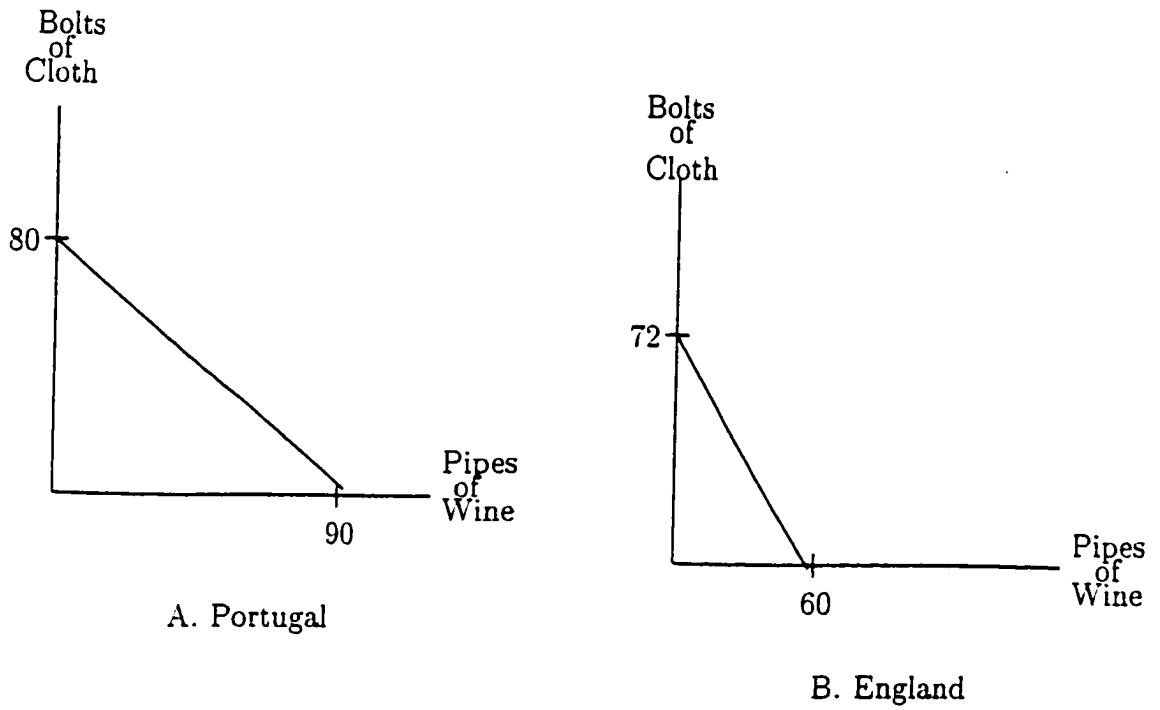
In Ricardo's facetious example, Portugal is a more efficient producer of both goods. Portugal's relative advantage in production across goods, though, was not his concern. Rather, he showed that even if one country has a relative advantage of both goods, both can benefit from trade as long as the costs of the goods differ across countries.

To complete the model, one needs to address the source of the cost differential. In Ricardo's words:

In one and the same country, profits are, generally speaking, always on the same level; or differ only as the employment of capital may be more or less secure and agreeable. It is not so between different countries. If the profits of capital employed in Yorkshire should exceed those of capital employed in London, capital would speedily move from London to Yorkshire,

⁹ For ease of illustration, it is assumed that there is no saving.

Figure II.1: Comparative Advantage: Production Possibilities in Autarky and with Trade



C. Portugal and England together

and an equality of profits would be effected; but if in consequence of the diminished rate of production in the lands of England from the increase of capital and population wages should rise and profits fall, it would not follow that capital and population would necessarily move from England to Holland, or Spain, or Russia, where profits might be higher.¹⁰ (Ricardo, 1817/1992:81–82)

...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...

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.

Experience, however, shows that the fancied or real insecurity of capital, when not under the immediate control of its owner, together with the natural disinclination which every man has to quit the country of his birth and connections, and intrust himself, with all his habits fixed, to a strange government and new laws, check the emigration of capital. These feelings, which I should be sorry to see weakened, induce most men of property to be satisfied with a low rate of profits in their own country, rather than seek a more advantageous employment for their wealth in foreign nations. (Ricardo, 1817/1992:83)

That is, comparative advantage hinges on assumptions of capital immobility across

¹⁰ Curiously, Ricardo is rarely credited by modern economists for suggesting that differences in factor endowments coupled with international factor immobility are the basis for his model of comparative advantage, and frequently mischaracterized as ignoring the role of capital in production. Jones and Neary echo the prevailing revisionism when they describe “the Ricardian model [as] the polar opposite of the exchange model in that only one productive factor (labor) is employed,” (Jones and Neary, 1984:4) and write further that “While the Ricardian model isolates differences in technology between countries as the basis for trade, the Heckscher-Ohlin model focuses instead on differences between commodities in the intensities with which they use these factors.” (Jones and Neary, 1984:14) While it is true that Ricardo’s model is, essentially, a one-factor model – capital is no more than congealed labor – Ricardo very clearly identified differences in factor supplies as the basis for the cross-national differences in autarky prices and hence, comparative advantage.

international borders. Modern trade theorists have taken this a step further, arguing that price differences across countries result because labor and capital endowments across countries differ, and *both* labor and capital are internationally immobile.

Extensions to Ricardo's theory

Both Smith and Ricardo argued that liberalized trade is in the collective interest. The remainder of neoclassical trade theory addresses the distribution of the benefits of liberalized trade, assuming as Ricardo did, that trade is driven by unequal factor endowments and international factor immobility. Heckscher-Ohlin provides the segue. First assume, as Ricardo did in his original work, that differences in factor endowments and the immobility of production factors explain cross-national differences in production costs of goods. Smith's competitive producers in each country will find the prices of their goods driven down to the sum of their component costs. If labor is relatively more abundant in one country than in another, then goods whose production requires more labor – i.e., goods whose production is labor-intensive – will be produced less expensively in that country. Heckscher and Ohlin inferred, then, that a country has a comparative advantage in the good that is relatively intensive in the country's relatively abundant factor. Put another way, we expect that under liberalized trade, countries will specialize in the goods whose production depends more heavily on the production factor with which they are relatively better-endowed – i.e, capital-rich countries will specialize in capital-intensive goods, while relatively labor-rich countries will specialize in labor-intensive goods.

This pattern of specialization and trade has implications for the compensation workers and the owners of capital receive for their contributions to production. If goods are not traded across international borders, workers in countries where labor is relatively scarce earn more than workers in countries where labor is relatively abundant, and therefore labor-intensive goods are relatively more expensive than

capital-intensive goods. (The reverse holds for countries where capital is relatively scarce.) Once trade is permitted, though, consumers from the country where labor is scarce bid up the price of the labor-intensive import, making it profitable for the producer in the labor-abundant country to pay higher wages. This is the logic behind the Factor-Price Equalization Theorem: free international trade between two countries will cause factor prices in the countries to become more equal. If both countries continue to produce both goods with free trade, their price will actually be equal.

The direction in which factor prices must move as trade is liberalized is clear: since the prices producers can command for labor-intensive goods increase in labor-abundant countries, and the prices producers can command for labor-intensive goods decrease in labor-scarce countries, trade liberalization results in increased wages in labor-abundant countries and decreased wages in labor-scarce countries. The same logic, of course, applies to the return to capital. This dynamic is known as the Stolper-Samuelson Theorem: an increase in the relative price of the labor-intensive good will increase the wage rate relative to both commodity prices and reduce the rent relative to both commodity prices.

The Factor Price Equalization and Stolper-Samuelson Theorems have critical implications for domestic politics. Since wages of workers in relatively labor-scarce countries are expected to fall as trade is liberalized, we expect workers in relatively labor-scarce countries to oppose trade liberalization, while we expect workers in relatively labor-abundant countries to favor it. Similarly, modern trade theory suggests that owners of capital in capital-scarce countries should oppose trade liberalization, and owners of capital in capital-rich countries should favor it.

In the current context, we expect political alignments in the developed and developing world to mirror each other. If the comparative advantage story and its corollaries accurately depict the foundations of international trade, the owners of capital in the developed world should favor trade liberalization while workers in the

developed world oppose it; and the owners of capital in developing countries should oppose liberalized trade while workers in developing countries lead the opposition.

Challenges to Modern Trade Theory

Political Behavior

These predictions are inconsistent with contemporary politics. Despite Ross Perot's talk of the "giant sucking sound down south," Mexican workers were not the driving force behind NAFTA; it was, instead, the culmination of the PRI's pro-business reforms and violently opposed by the lower class. As with NAFTA, market reforms in the rest of Latin America have been pushed by the business elite in the United States and the developing countries themselves – an alliance inconsistent with the material interests suggested by the Stolper-Samuelson Theorem – and resisted by workers in both sets of countries.

Indeed, while most political scientists continue to pay homage to the theory of comparative advantage as the proof that free trade is a public good, economists increasingly doubt its power to explain current patterns in world trade. The theory itself is not directly testable, because autarky prices cannot be observed. An important implication, though, is that the bulk of international trade will be between different countries (with different sorts of factor endowments) and that these countries will specialize in the goods in which they have a comparative advantage. In fact, the bulk of international trade is between like countries and in similar goods. Japan and the U.S., for example, sell cars to each other – a contradiction of the theory addressed in a growing literature on differentiated products. While the starkest difference in factor endowments are between the capital-rich developed countries and the relatively labor-rich developing countries, the vast majority of international trade

is conducted within the developed world.¹¹ Moreover, a key assumption behind the theory is that labor and capital are not traded across international borders. This is not true; indeed, foreign investment and the employment of extranationals by firms with plants in foreign countries has been rapidly increasing.

Distribution and Dynamics

A second set of challenges arises from consideration of long-run dynamics of the world economic system.

Raoul Prebisch and changing Terms of Trade

The most persuasive by far has been Raoul Prebisch's analysis demonstrating that because of the nature of LDCs' economies, in the long run the prices of the goods that they produce will fall relative to those of the goods produced by the advanced industrial states. This declining terms of trade will result in LDCs' having a progressively smaller share of world income – that is, instead of catching up with the developed world, developing countries will fall further behind.

Prebisch's argument is based on two characteristics of LDCs' economies. First, by definition, they are characterized by the predominance of subsistence agriculture. Slack labor markets (excess labor supply) means that increased productivity doesn't lead to increased wages. The Stolper-Samuelson Theorem fails because producers in developing countries do not need to offer higher wages to coax more work from those already in the labor force; they need only draw from the large pool of the population not yet employed in the formal sector.

Second, and again by definition, LDCs' exports tend to be agricultural products, most of which are sold as food. As incomes rise, though, demand for necessities

¹¹ See Markusen and Wigle (1990) for an early exploration of this phenomenon.

doesn't change very much; instead, consumers are able to spend more of their incomes on luxury goods. As global wealth increases, then, the share paid for food should steadily decrease. The declining terms of trade for agricultural products means that countries specializing in those goods will be able to command smaller and smaller shares of global wealth.

Smith's exuberance concerning the absolute gains to the world as a whole from specialization is tempered, then, by Prebisch's warning that freezing the current pattern of world trade into place means exacerbating existing income inequalities. The recognition that immediate gains to developing countries from specialization and trade may lead to a long-run distribution of wealth that works against them provided part of the impetus for a literature advocating protection of inefficient local industries. For some of the same reasons that Pombal rejected Smith's recommendation that Portugal placidly accept its role as a supplier of Brazilian gold, later writers argued in favor of government intervention into markets in order to promote infant industries that might suffer short-term losses but lead to a more favorable distribution of wealth in the long run.¹²

Dependency Theories

Prebisch's focus on a mechanism leading to growing inequality between the developed and developing world was shared by writers in the dependency school, typically associated with two sets of writers. One sought to incorporate not only recognition of the widening North-South inequality associated with development programs and private investment in Latin America sponsored by the North, but also an explanation for the striking exacerbation of income inequality *within* Latin American countries during development. Dependency school arguments were based not on the develop-

¹² Important aspects of the debate over the effectiveness of tariffs as a means of promoting infant industries are discussed in Meade (1955), Kemp (1964), Johnson (1965) and Baldwin (1969).

ing countries' specialization in agriculture, but on claims that outsiders were able to expropriate Latin American resources without paying the appropriate remuneration. There is a fair amount of diversity in this literature: Gunder Frank, for example, focused on capital expropriation on the part of colonial powers; Baran and Bodenheim discussed the developed world's role in shaping Latin American institutions and Evans wrote of collusion between local elites and foreign direct investors. (Gunder Frank, 1966, 1967; Baran, 1957; Bodenheim, 1971; Evans, 1979) Central to the arguments of all of these writers, though, is the conviction that "modernization" for countries developing after Western Europe and the United States cannot be understood without reference to the relationship between the developed and developing world, and a rejection of Gerschenkron's suggestion that later development was easier, *ceteris paribus*, by virtue of the availability of established models and financial infrastructure. (Gerschenkron, 1962) They describe an alliance between the owners of capital in the developed and developing world that is consistent with the Latin American experience in particular, and contradicts the predictions of neoclassical trade theory; and they provide an explanation for the growing inequality between the developed and developing worlds, an empirical fact not addressed in the classical models.

A second strain of dependency theory focused on unequal exchange from the other side. Baran and Sweezy, most notably, revived and extended the concerns of Lenin and Hobson that the developed world would eventually produce more than it could consume, and use its market dominance to extort higher prices for its goods than Smith's "natural price." (Hobson, 1902; Lenin, 1939; Baran and Sweezy, 1968) While their work – indeed, the work of dependency theorists in general – was perversely lumped with Marxism and dismissed as anti-capitalist false consciousness by mainstream political scientists,¹³ its assumptions form the starting point for one of the

¹³ Lenin, not Marx, viewed capitalism as a stage best skipped; Marx presented a teleology of inevitable stages. Moreover, he openly admired capitalism as a means of escaping the oppressive

most vibrant centers of activity in contemporary mainstream economics. Strategic trade theory, introduced by Helpman and Krugman in a landmark 1985 book, explores the effects of the economies of scale enjoyed by producers in the developed world and the role of imperfect competition in product pricing.

Conclusions

The neoclassical claim that perfectly free markets lead to the optimal allocation of resources, then, is based on the static models of Smith and Ricardo. While the models themselves are quite persuasive, the predictions of political behavior based on the nature of material interests implied by the models are inconsistent with contemporary politics. While corollaries to Ricardo's comparative advantage story suggest that workers in developing countries should benefit from liberalized trade with the developed world and the owners of capital should suffer from lower returns, the owners of capital in developing countries are leading the push for free markets and workers are leading the opposition. Moreover, the staggering inequalities – both intranational and international – that accompanied market liberalization in Latin America in particular are not predicted by neoclassical models. Both phenomena are consistent with the predictions of the dependency theorists, but the microfoundations of dependency theory tend to be murky and are arguably belied by the development experience of countries such as South Korea.

Myriad explanations might be gleaned from more recent economic literature: The Stolper-Samuelson Theorem is not easily generalized to a multi-country, multifactor world;¹⁴ returns to scale are not constant, leading to concentrated industries and

feudalism in Western Europe and economic stagnation in India and Asia, and viewed favorably many colonial powers' introduction of market systems into their colonies. See, for example, Marx (1853). An excellent discussion of the relationship between Marx's work and dependency theory is provided by Wolfe (1997).

¹⁴ See Leamer, 1980, for example.

hence imperfect competition; etc. I seek here to offer a single explanation for these phenomena and others that are typically explained by disparate theories.

Further, all of the arguments presented thus far are based on barter models of trade; they do not allow for the possibility that monetization has a non-neutral effect on market allocation. Indeed, the purchasing power parity theory which forms the cornerstone of mainstream thought concerning international currency pricing is adopted wholesale from domestic macroeconomic theory, and nowhere acknowledges what is obvious even to the casual modern observer: some currencies are considered to be better stores of value than others. The distinction between “hard currencies” and “soft currencies” is so central to international financial practice that the IMF discriminates between them in the Articles of Agreement specifying acceptable means of payment.

In this volume, I argue that the distinction is strongly tied to political factors, and that it has important implications for the global distribution of wealth and power under a pure *laissez-faire* economic regime. In chapter 3, I present a model in which risk-averse traders demand a premium for holding the “soft” currencies of developing countries instead of “hard” currencies of established powers. This introduces an endogenous distortion that shifts market equilibrium from the desired efficient outcome presented in standard economic exchange models. I refer to the dynamic I describe as “market realism” — the tendency for international markets, under *laissez-faire*, to favor powerful countries at the expense of weaker countries and the community of nations as a whole.

CHAPTER III

MARKET REALISM: CURRENCY PRICING AND THE GAINS FROM TRADE BETWEEN COUNTRIES AT DIFFERENT LEVELS OF POLITICAL DEVELOPMENT

Chapter 1 introduced the foundations for the neoliberal interpretation of international institutions' advocacy of liberalized trade. A critical assumption behind the neoliberal perspective is that free markets are in the collective interest – that is, that liberalized trade maximizes the gains to world as a whole, without regard to how those gains might be distributed. The economic theory underpinning this belief was reviewed in Chapter 2, “Economics and Interest,” where I also noted that the principal challenges to *laissez-faire* economics have concerned distributional issues, not market liberals' claim that perfectly free markets lead to the optimal use of resources. In this chapter, I present a model that calls this latter belief into question. While the classic arguments upon which free market liberalism is founded involve barter models of trade, I introduce differentially risky currencies, and derive two important results. First, consumers in countries with the riskier currency pay higher prices in perfectly free markets than those with less risky currencies, shrinking their share of world output. Second, currency traders' aversion to risky currencies introduces an endogenous distortion into perfectly free markets that leaves the equilibrium suboptimal from the perspective of the collective interest.

Central to the argument is the notion of dynamic inefficiency. The risk premium demanded by traders in the first period for holding the risky currency drives a wedge between the forward exchange rate and the corresponding spot exchange rate (the spot exchange rate realized at the time the forward transaction would actually occur). The goods market equilibrium achieved in the second period, then, is Pareto inferior to an allocation achievable by an omniscient social planner able to tax, subsidize and redistribute costlessly.

The chapter begins with a review of the nuts and bolts of the standard general equilibrium model. In the middle section, I introduce currencies. First I demonstrate that the barter results do not change when risk-free currencies are introduced; then I derive the results described by allowing the currencies to be differentially risky. In the final section, I describe the nature of the interventions that the omniscient, omnipotent social planner could enforce to achieve a Pareto superior outcome.

The standard barter model

For most westerners, the suggestion that unfettered markets are efficient has attained the status of “well-known fact”; the proof, however, is unfamiliar. In broad outline, it follows the logic discussed in Chapter 2. Prices producers are willing to accept are still determined by the cost of the inputs they use in production, akin to Smith’s “natural price.” Input costs, though, are no longer tied to the amount of labor embodied in the inputs. Rather, they are determined indirectly by the utility consumers attach to the various goods that can be produced by them. The argument, then, is composed of three pieces. The first piece describes the behavior of a utility-maximizing consumer, and derives a relationship between his utility function and the rate at which he will be willing to exchange two goods (that is, the barter price – in the illustration that follows, the number of coffee beans he will pay for an M&M). The second piece describes the behavior of profit-maximizing producers.

The critical result here is that when producers are producing as much of two goods as they can, the price they're willing to accept is related to the relative amounts of inputs required to produce each of the two products. The third piece combines the two pieces of information about price for the final result. If the barter price is related, through consumer behavior, to the consumer's relative utilities for the two goods; and it is related, through producer behavior, to the relative input costs of the two goods; then the relative input costs of the two goods must be related to the consumer's relative utilities for them. More precisely, the market mechanism – the interaction of producer and consumer incentives – allocates inputs in such a way that out of all combinations of two goods that can be produced from a given set of inputs, the combination that will be produced is the one that consumers will be happiest with.

With no intervention

Formally, consider two representative agents, Susan and Pedro, residing in two different countries. Both subsist on coffee and M&M's. Susan's country has a comparative advantage in M&M production, Pedro's has a comparative advantage in the production of coffee. For clarity of exposition, complete specialization is assumed.¹ Assume that both are rational utility maximizers with identical utility functions. Both like M&M's and coffee, but enjoy each additional cup of coffee and handful of M&M's a little less than the last one consumed – that is, their common utility function $U(\cdot)$ is assumed to be increasing in M&M and coffee consumption ($\partial U/\partial C_{mm} > 0, \partial U/\partial C_{cf} > 0$) but concave ($\partial^2 U/\partial C_{mm}^2 < 0, \partial^2 U/\partial C_{cf}^2 < 0$). Additionally, it is assumed to be twice differentiable. Pedro, then, will trade coffee for

¹ Allowing for incomplete specialization (the more general case) does not change the results at all; it merely adds the requirement that we keep track of four goods – Susan's M&M's and coffee produced by Susan, and M&M's and coffee produced by Pedro – instead of two.

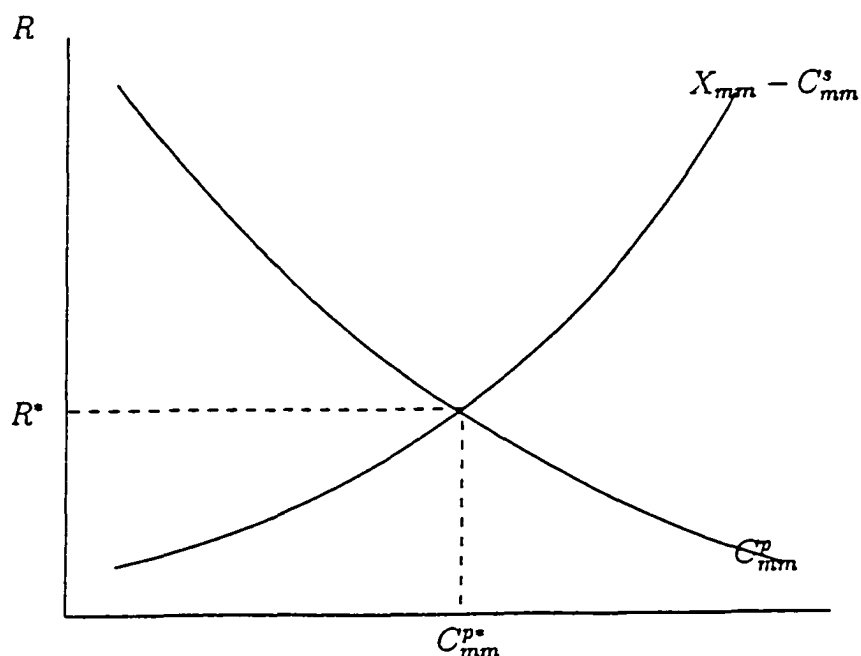


Figure III.1: General equilibrium in the barter economy, no taxes

some of Susan's M&M's. A model of their exchange, viewed from Pedro's perspective, is presented in Figure III.1. The barter price is expressed in terms of the number of coffee beans Pedro pays for each M&M. The downward sloping demand curve represents the number of M&M's he is willing to buy at different price levels; the upward-sloping supply curve represents the quantity of M&M's that Susan is willing to supply at different prices. In equilibrium, Pedro buys C_{mm}^{p*} M&M's from Susan in exchange for a quantity of coffee beans that will become her final coffee consumption, C_{cf}^{s*} . The ratio of these two quantities is the equilibrium barter price, R^* , the number of coffee beans needed to purchase an M&M. More formally, the following notation will be used to model Susan and Pedro's decisions:

C_{mm}^s	Susan's consumption of M&M's
C_{mm}^p	Pedro's consumption of M&M's
C_{cf}^s	Susan's consumption of coffee

C_{cf}^p	Pedro's consumption of coffee
R	the price of M&M's in terms of coffee beans; the real exchange rate
Y^s	Susan's income, expressed in M&M's.
Y^p	Pedro's income, expressed in coffee beans.
X_{mm}	Total M&M production
X_{cf}	Total coffee production
K_{mm}	Capital used in M&M production
K_{cf}	Capital used in coffee production
$F_{mm}(K)$	Production function for M&M's
$F_{cf}(K)$	Production function for coffee
r	Rental price of capital, in coffee beans
λ_i	Lagrange multipliers

Pedro, then, maximizes utility

$$U(C_{mm}^p, C_{cf}^p) \quad (1)$$

while satisfying his budget constraint,

$$RC_{mm}^p + C_{cf}^p \leq Y^p. \quad (2)$$

Assuming nonsatiation, Pedro spends his entire budget and the first order conditions from the Lagrangean are

$$\partial U / \partial C_{mm}^p - \lambda_1 R = 0, \quad (3)$$

$$\partial U / \partial C_{cf}^p - \lambda_1 = 0, \quad (4)$$

Solving the first order conditions for λ_1 and rearranging terms yields an important result:

$$R = \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p}. \quad (5)$$

The first implication of (5) is that Pedro will be willing to exchange coffee and M&M's at a rate equal to the ratio of his enjoyment the last M&M he eats to his enjoyment

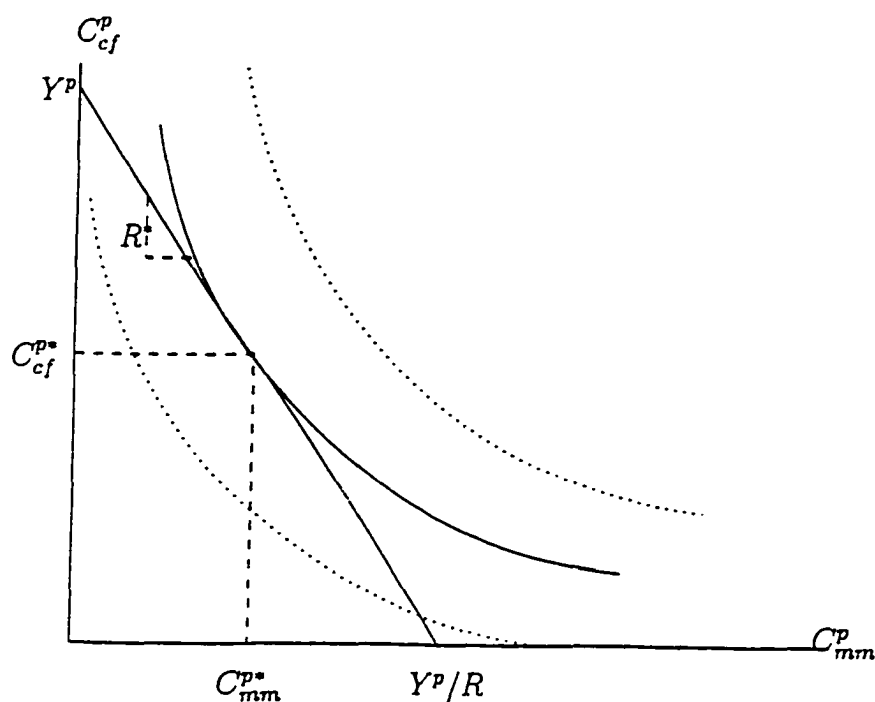


Figure III.2: Pedro's utility maximization problem, no tariff

of the last drop of coffee he drinks; the price at which he's willing to exchange them will reflect his tastes. If this were not the case, he would prefer to give up some of one good in exchange for more of the other. This may be more familiar to many readers as the illustration in Figure III.2: utility maximization occurs at the point where Pedro's budget line is tangent to one of his indifference curves. In more concrete terms, (5) tells us which choice Pedro will make if, for example, he can afford one cup of coffee and thirty M&M's, or a half-cup of coffee and ninety M&M's, or no coffee but 150 M&M's. Second, and more important, this tells us that (5) holds for the demand functions $C_{mm}^p(R, Y)$ and $C_{cf}^p(R, Y)$ derived from Pedro's maximization problem. Since prices and output will be determined by the interaction of supply and demand, (5) enters into the determination of the relative prices of the two goods, therefore into how much of each good will be produced, and so finally, into the

determination of how much of the capital stock will be allocated to M&M production and how much to coffee production. To see this, turn now to the supply side. To keep things as simple as possible, without any loss of generality, Susan and Pedro are assumed to supply labor costlessly, but pay r coffee beans for each unit of capital consumed. Susan maximizes profits

$$RX_{mm} - rK_{mm}, \quad (6)$$

subject to the production function

$$X_{mm} \leq F_{mm}(K_{mm}). \quad (7)$$

Assuming she produces as much as she can, the first order conditions yield

$$R = \frac{r}{\partial F_{mm}/\partial K_{mm}} \quad (8)$$

At the same time, Pedro maximizes profits

$$X_{cf} - rK_{cf} \quad (9)$$

subject to the constraint

$$X_{cf} \leq F_{cf}(K_{cf}) \quad (10)$$

Assuming he also produces as much as he can, the first order conditions of his maximization problem yield

$$r = \frac{\partial F_{cf}}{\partial K_{cf}} \quad (11)$$

Substituting (11) into (8),

$$R = \frac{\partial F_{cf}/\partial K_{cf}}{\partial F_{mm}/\partial K_{mm}}. \quad (12)$$

(12) tells us that producers will behave in such a way that the barter price is equal to the marginal rate of transformation – metaphorically, the rate at which coffee beans could be “unpicked” to the bushes they were taken from, and the recovered capital

could be reallocated to M&M production. More concretely, (12) tells us that profit-maximizing producers will charge prices that reflect the costs of the inputs they use in production. Equating (5) and (12),

$$\frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p} = \frac{\partial F_{cf} / \partial K_{cf}}{\partial F_{mm} / \partial K_{mm}} : \quad (13)$$

the marginal rate of substitution is equal to the marginal rate of transformation. When prices serve to equate the marginal rate of transformation with the marginal rate of substitution, no combination of goods can be produced from the factor inputs that would be valued more highly than the current combination. In other words, the price mechanism acts as an invisible hand ensuring that factors are put to best use.

The barter model with a tax

Now consider what happens if Pedro's government places a tariff on M&M imports. He still maximizes $U(C_{mm}, C_{cf})$ as in the previous analysis, but if we let t be the tariff rate, his budget constraint becomes

$$R(1+t)C_{mm}^p + C_{cf}^p \leq Y^p. \quad (2')$$

Only the second first-order condition changes. (3) still holds, (4) becomes

$$\partial U / \partial C_{mm}^p - \lambda_2 R(1+t) = 0. \quad (4')$$

and (5) is now

$$R = \frac{1}{1+t} \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p} \quad (5').$$

This introduces two problems. The first is the obvious one: Pedro is able to buy less coffee. As seen in Figure III.3, his consumption bundle is now on a lower indifference curve; he is clearly worse off. The second problem is more subtle. Imagine that we could give Pedro enough additional income so that he could reach his pre-tariff utility level after the tariff has been applied. This can be represented graphically by

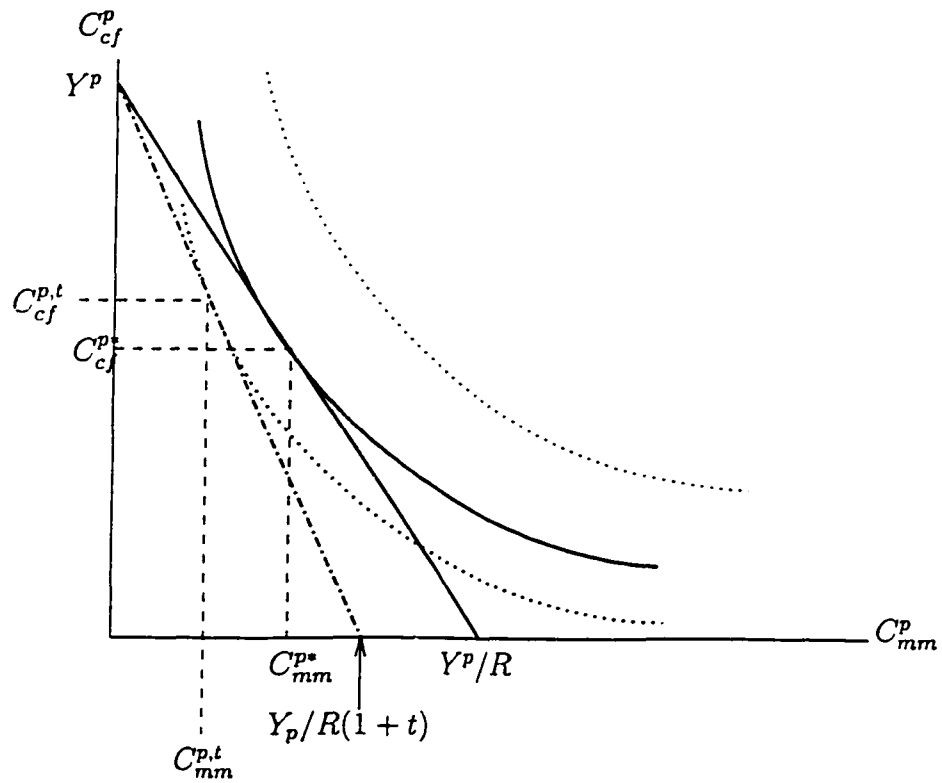


Figure III.3: Pedro's utility maximization problem, with a tariff on M&M's

shifting the new budget line outward, until it touches the pre-tariff indifference curve but is still parallel to the tariffed budget line. The additional compensation would allow Pedro to purchase a combination of coffee and M&M's that makes him just as happy as the pre-tariff combination, but they are not the same consumption bundle. Because the tariff necessitates that he forego more coffee beans for each M&M, the bundle purchased with his income and the additional compensation will include more coffee and fewer M&M's than the bundle he purchased before the tariff. His choice, in other words, no longer reflects the relative input cost of the two goods. (13) becomes

$$\frac{1}{1+t} \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p} = \frac{\partial F_{cf} / \partial K_{cf}}{\partial F_{mm} / \partial K_{mm}} \quad (13')$$

The marginal rate of substitution is no longer equated with the marginal rate of transformation. The price distortion introduced by the tariff has broken the link between them, and as a result, production inputs are no longer put to their best use. The standard analysis of the resulting social welfare loss is presented graphically in Figure III.4. Since prices are represented on the vertical axis and quantities on the horizontal axis, areas in the graph – price x quantity – can be used to represent social costs² and the benefits accruing to various actors. The area below the supply curve ($X_{mm} - C_{mm}^s$) represents the cost of output, and the area below the demand curve represents the value Pedro attaches to it. At the free market equilibrium 2, then, surplus value – value above input costs – can be represented by the near-triangle to the left of 2, below the demand curve and above the supply curve. At the equilibrium price R^* , Susan receives the portion of this value below the line 812; this difference between the revenue she receives and her costs is referred to as the “producer surplus.” The rest of the surplus value, the area to the left of 2, above 812 and below the demand curve, accrues to Pedro. This difference between what he pays for coffee and what

² A critical assumption behind this analysis of social costs is that we are unconcerned with distributional issues – we place the same value on a marginal dollar spent on taxes, for example, as we do on a marginal dollar accruing to Susan or to Pedro.

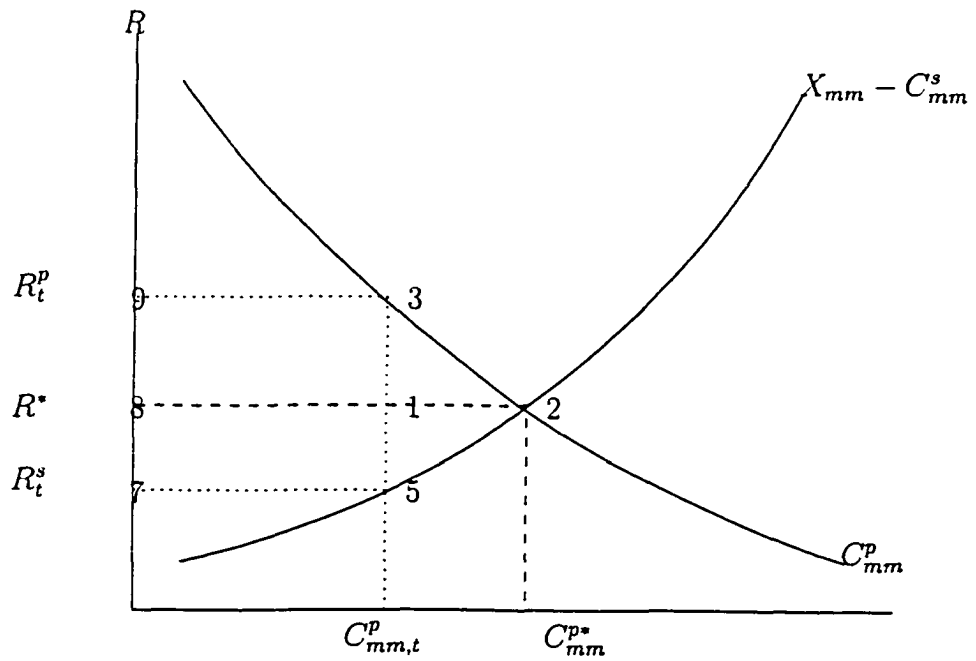


Figure III.4: General equilibrium in the barter economy, with a tariff on M&M imports

he was willing to pay is referred to as his “consumer surplus.” The social cost of the tariff can be assessed by comparing the surplus value associated with the free market equilibrium with the surplus value associated with the tariff equilibrium. In Figure III.4, Pedro now pays R_t^p for coffee; at this price, he will buy only $C_{cf,t}^p$ coffee beans. The total surplus value afforded in this equilibrium, then, is represented by the area of the near-rhomboid bounded by line 315, the demand curve, the Y-axis, and the supply curve. The lost surplus value, then, is the near-triangle 235, often referred to as the “deadweight loss.” The problem is not resolved by considering Susan’s point of view. Pedro is importing fewer M&M’s, and neither Susan nor Pedro has changed the rate at which they’re willing to substitute coffee for M&M’s. Susan, then, is able to import less coffee. Put another way, even if Pedro is compensated with the tax revenue, the distortion the tariff introduces into the price line he sees results in different allocation of coffee and M&M’s than was realized without the tariff, and the original allocation $(C_{mm}^{s*}, C_{mm}^{p*}, C_{cf}^{s*}, C_{cf}^{p*})$ was preferred. Put still another way, as long as the marginal rate of substitution is not equated with the marginal rate of transformation, there is a deadweight loss – a loss that is recovered by no one, and therefore represents a social welfare cost.

The redistributive effects in this case are even more stark, and are typically used to illustrate the temptation of “rent-seeking.”³ The total loss in Pedro’s consumer surplus is represented by the area 21893; the total loss in producer surplus to Susan is represented by the area 21875. The tax revenue, though, is represented by the rectangle 9357. Assuming that the tax revenue accrues to Pedro, his net loss in consumer surplus is the near-triangle 123, but he gains a portion of what Susan had

³ The term is typically credited to Anne Krueger (1974), although her canonical paper is specifically about non-tariff barriers. Bhagwati and Srinivasan (1980,1982) address rent-seeking through tariffs more directly. Additionally, it has long been recognized that developing countries tend to rely more heavily on trade for their tax revenues than developed countries do because the former are less able to tax their own constituents.

been receiving as producer surplus, 8157. In other words, Susan bears more than the total of the social cost, and Pedro comes out ahead. In the following section, I will show that currency risk premiums introduce a distortion that has a similar effect. While the incidence is not the same as that for the tax on Susan's coffee imports, the risk premium still serves to drive a wedge between the marginal rate of substitution and the marginal rate of transformation that moves the equilibrium away from the efficient equilibrium.

Add currencies

Now suppose that money is used for transactions in both economies. Dollars(\$)

are used in Susan's country, while pesos(ρ) are used in Pedro's. First, some new terms:

P_{mm} the price of M&M's in dollars

P_{cf} the price of coffee in pesos

S the spot exchange rate, in pesos per dollar.

To make it clear that the distortion is caused by the risk premium and not merely by the introduction of currencies, the analysis is presented in two parts. In the first, I show that the desirable free market equilibrium obtains when currencies are used but since all transactions are simultaneous, riskiness is not an issue. In the second, I assume that transactions are contracted in advance, and that one currency is perceived as being riskier than the other.

Contemporaneous trade with currencies

In this case, Pedro still maximizes $U(C_{mm}, C_{cf})$, but his budget constraint becomes

$$SP_{mm}C_{mm}^p + P_{cf}C_{cf}^p \leq P_{cf}Y^p. \quad (2''')$$

The new first order conditions are

$$\partial U / \partial C_{mm}^p - \lambda_3 S P_{mm} = 0, \quad (3''')$$

$$\partial U / \partial C_{cf}^p - \lambda_3 P_{cf} = 0, \quad (4''')$$

When we solve (3''') and (4''') for λ_3 , equate the two expressions, and solve for the exchange rate, we find

$$S = \frac{P_{cf}}{P_{mm}} \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p}. \quad (5''')$$

To evaluate whether or not this is consistent with the maximally efficient allocation, though, we need an expression involving R , the real exchange rate. Specifically, we need to derive the relationship between the spot exchange rate S and the barter price R . In the case of simultaneous transactions, this is straightforward. Money is valued only for its purchasing power (its function as a store of value is irrelevant), and its purchasing power is known. It must be the case, then, that

$$S = R \frac{P_{cf}}{P_{mm}}. \quad (14)$$

Substituting this into (5''') yields

$$R = \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p}, \quad (15)$$

as in the barter case.

Trade using differentially risky currencies

Suppose, however, that Susan and Pedro must contract in advance for imports. Then they must set prices and amounts to be exchanged in advance, and secure foreign currency on the forward market. Let $F_{t,t+1}$ represent the current price, in pesos, of dollars delivered in the next period. P_{mm} and P_{cf} represent the future prices contracted in the current period. S_{t+1} represents the future spot exchange rate, and $E_t(S_{t+1})$ is this period's expectation of next period's spot rate. I assume that utilities

are constant through time; i.e., that $U_t(C_{mm,t+1}, C_{cf,t+1}) = U_{t+1}(C_{mm,t+1}, C_{cf,t+1})$.

Then Pedro maximizes

$$U_t(C_{mm,t+1}, C_{cf,t+1}) \quad (1''''')$$

while satisfying his budget constraint,

$$F_{t,t+1}P_{mm}C_{mm,t+1}^p + P_{cf}C_{cf,t+1}^p \leq P_{cf}Y_{t+1}^p. \quad (2''''')$$

Assuming nonsatiation, Pedro spends his entire budget and the first order conditions from the Lagrangean are

$$\partial U / \partial C_{mm,t+1} - \lambda_4 F_{t,t+1} P_{mm} = 0, \quad (3''''')$$

$$\partial U / \partial C_{cf,t+1} - \lambda_4 P_{cf} = 0, \quad (4''''')$$

The demand functions $C_{mm,t+1}^p(P, Y_{t+1}^p)$ and $C_{cf,t+1}^p(P, Y_{t+1}^p)$ can be derived from these conditions and the budget constraint. In this case, solving the first order conditions for λ_4 and equating gives

$$F_{t,t+1} = \frac{P_{cf}}{P_{mm}} \frac{\partial U / \partial C_{mm,t+1}^p}{\partial U / \partial C_{cf,t+1}^p}. \quad (5''''')$$

If the forward rate $F_{t,t+1}$ were equal to the realized spot rate, S_{t+1} , the solution would be the same as in previous case where all exchanges are contemporaneous. Empirically, this tends not to be the case, though. There is an extensive literature documenting bias in forward exchange rates.⁴ The bias is commonly interpreted as a risk premium: unlike the case of simultaneous exchanges, money's role as a store of value comes into play, and some currencies are perceived as being more trustworthy than others. The relevance of political factors for currency risk premiums has been argued in MacDonald and Taylor (1991), Baker (1997) and Christodoulakis and Kalyvitis (1997), and has been demonstrated empirically in Bachman (1992)

⁴ Hodrick (1987), Levich (1985), Lewis (1995) and Engel (1996) provide extensive surveys. The subject is addressed in more detail in Chapter 4.

and Bernhard and LeBlang (2002).⁵ In the case of a currency exchange between developed and developing countries, we might expect currency traders to view the currency of the less developed country as riskier, in general, than the currency of the developed country for several reasons. Where economic institutions are still nascent, future money supplies and convertibility are less predictable than in countries with longstanding monetary authorities who have established patterns of behavior. Moreover, developing countries are more vulnerable to political disturbances that affect the trustworthiness of their currencies. In extreme cases, the stability of property rights and enforceability of contracts may be in question. In this case, suppose Pedro's currency is perceived to be riskier, as a store of value, than Susan's currency, and that both agents are risk-averse. Then the forward rate, $F_{t,t+1}$ must exceed the realized spot rate, S_{t+1} : Susan will demand a premium for agreeing to make the future exchange of dollars for pesos that is necessary to complete the trade. If we let ϵ represent the risk premium,

$$F_{t,t+1} = S_{t+1} + \epsilon. \quad (16)$$

We know that by definition,

$$S_{t+1} = R_{t+1} \frac{P_{cf}}{P_{mm}}. \quad (14')$$

From (5'''), (16) and (15'),

$$R_{t+1} = \frac{S_{t+1}}{S_{t+1} + \epsilon} \frac{\partial U / \partial C_{mm,t+1}^p}{\partial U / \partial C_{cf,t+1}^p} \quad (17)$$

– a new equation for the real exchange rate. Notice that when the two currencies are viewed as being equally risky (or riskless), $\epsilon = 0$ and (17) is identical to equation (5), the real exchange rate in the barter case. When Pedro's currency is perceived as being riskier than Susan's, however, the risk premium is positive, and the real exchange rate is less than it is in the barter case. That is, Pedro pays more for Susan's M&M's, or

⁵ To my knowledge, no one has considered the distributional consequences of currency risk premiums.

put another way, Susan pays fewer M&M's for Pedro's coffee beans. Pedro's share of world output, then, drops while Susan's share increases. Moreover, just as in the case of a tariff, a wedge has been driven between the marginal rate of substitution and the marginal rate of transformation. The risk premium introduces an endogenous distortion that keeps the price mechanism from directing inputs to their best uses, so the risk premium not only results in a redistribution from Pedro to Susan, but also results in a social welfare loss.

Welfare-improving alternatives

Jagdish Bhagwati, in his seminal piece on optimal intervention (1971/1987), classifies trade distortions into four general categories, and describes welfare-improving policy interventions for each case. His treatment differs from mine in two important respects. First, he deals only with real-side phenomena (the barter case); distortions due to the deviation of currency pricing from purchasing power parity are not considered. Second, he assumes all decisions are contemporaneous. This latter difference is especially important. The distortion described in the previous section arises purely from dynamic, not static, inefficiency. The same problem that creates the endogenous distortion I have described – agents' inability to predict the future exchange rate – must plague attempts at optimal intervention. Moreover, the criterion for dynamic inefficiency is the notion that the equilibrium achieved is inferior to an equilibrium reachable through intervention by an omniscient, omnipotent social planner. The analysis that follows, then, is intended less as prescription than as the final piece of the proof that the free market equilibrium is not the optimal equilibrium, and more important, support for the argument that the market liberalization policies advocated by international institutions are not consistent with the collective interest.

Bhagwati's advice that optimal interventions should directly address the source of the distortion has direct implications for exchange controls: clearly the most straight-

forward way to eliminate the distortion introduced by currency risk premiums is by enforcing a forward exchange rate that more closely approximates the realized spot rate. Developing countries that sell their currencies forward at a premium over the market rate, then, may be enhancing global welfare by defying the advice of institutions such as the IMF. Second best interventions are those described by Bhagwati for cases where, as he describes them, “ $DRS \neq DRT = FRT$ ” – a wedge has been driven between the marginal rate of substitution and the marginal rate of transformation. In this case, either subsidizing Pedro’s M&M consumption or taxing Susan’s coffee consumption will offset the distortion introduced by the risk premium. Proofs follow.

Subsidizing M&M consumption

Assume that conditions are the same as those described in the section “Trade with differentially risky currencies,” except that Pedro’s M&M consumption is subsidized at rate $1/(1+b)$. Intuitively, the subsidy offsets the risk premium he pays for importing M&M’s.

His utility function remains the same, but his budget constraint becomes

$$(1/1+b)F_{t,t+1}P_{mm}C_{mm}^p + P_{cf}C_{cf}^p \leq P_{cf}Y^p. \quad (2''''')$$

Assuming nonsatiation, Pedro spends his entire budget and the first order conditions from the Lagrangean are

$$\frac{\partial U}{\partial C_{mm}^p} - \lambda_5 \frac{1}{1+b} F_{t,t+1} P_{mm} = 0, \quad (3''''')$$

$$\frac{\partial U}{\partial C_{cf}^p} - \lambda_5 P_{cf} = 0, \quad (4''''')$$

Solving the first order conditions for λ_5 and equating gives

$$\frac{P_{mm}}{P_{cf}} = \frac{1+b}{F_{t,t+1}} \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p}, \quad (5''''')$$

Recalling

$$S_{t+1} = R_{t+1} \frac{P_{cf}}{P_{mm}}, \quad (14')$$

and

$$F_{t,t+1} = S_{t+1} + \epsilon \quad (16)$$

(5''''') becomes

$$R_{t+1} = \frac{S_{t+1}(1+b)}{S_{t+1} + \epsilon} \frac{\partial U / \partial C_{mm}^p}{\partial U / \partial C_{cf}^p} \quad (18)$$

Clearly, for $b = \epsilon/S_{t+1}$, the subsidy offsets the distortion introduced by the currency risk premium, the price mechanism acts to equalize the marginal rate of substitution and the marginal rate of transformation, and so factors are put to best use.

While the subsidy mitigates the effects of the distortion regardless of its source, to prevent redistribution in favor of Susan, the subsidy must come from her. In other words, the developing world's subsidy of third world imports is one intervention that redresses the distortion introduced by currency risk premium. Considered in this light, third world demands for a Generalized System of Preferences can be defended as promoting not just the interests of developing countries, but the collective interest.

Taxing Susan's coffee consumption

Suppose, instead, that Susan's coffee consumption is taxed at rate t . Intuitively, we want to make her refund the risk premium that accrues to her whenever she converts currency to import coffee. While we have been examining the utility maximization problem from Pedro's perspective so far, the logic is the same for Susan.

She maximizes utility

$$U(C_{mm}^s, C_{cf}^s), \quad (1')$$

subject to the budget constraint

$$P_{mm}C_{mm}^s + (1+t) \frac{1}{F_{t,t+1}} P_{cf}C_{cf}^s \leq P_{mm}Y^s. \quad (2''''')$$

Assuming nonsatiation, Susan spends her entire budget and the first order conditions from the Lagrangean are

$$\partial U/\partial C_{mm} - \lambda_6 P_{mm} = 0, \quad (3''''')$$

$$\partial U/\partial C_{cf} - \lambda_6 \frac{1}{F_{t,t+1}}(1+t)P_{cf} = 0, \quad (4''''')$$

In this case, solving the first order conditions for λ_6 and equating gives

$$\frac{P_{mm}}{P_{cf}} = \frac{1+t}{F_{t,t+1}} \frac{\partial U/\partial C_{mm}^s}{\partial U/\partial C_{cf}^s} \quad (5''''')$$

Again, recalling

$$S_{t+1} = R_{t+1} \frac{P_{mm}}{P_{cf}}, \quad (14')$$

and

$$F_{t,t+1} = S_{t+1} + \epsilon \quad (16)$$

(5''''') becomes

$$R_{t+1} = \frac{S_{t+1}(1+t)}{S_{t+1} + \epsilon} \frac{\partial U/\partial C_{mm}^s}{\partial U/\partial C_{cf}^s} \quad (19)$$

A tax such that $t = \epsilon/S_{t+1}$ offsets the distortion introduced by the currency risk premium. In other words, it is both in the individual interest of developing countries, and in the collective interest, for the developed world to pay higher nominal prices for third world goods than third world consumers are required to pay.

Conclusions

The neoliberal interpretation of international institutions holds that institutions such as the GATT, its successor the WTO, the IMF, and the World Bank help international actors reach the mutually cooperative outcome in interactions appropriately modelled as a prisoner's dilemma. Intervention in trade has long been considered a textbook example: countries have private incentives, it is argued, to impose tariffs and other trade barriers. If both countries in a trading pair follow their private interests, though, they reach an outcome that is less desirable both individually and

collectively than the outcome that would have resulted if they had both adhered to (*laissez-faire*) trade policies. These beliefs have formed the basis for the developed world to make market liberalization a chronic condition for loans by the World Bank and the IMF, and an explicit goal of the GATT and the WTO. These beliefs, however, are based on barter models of trade, such as the model presented in the first section of this chapter. They do not take into account the distortion introduced because currency pricing is affected not only by economic factors, but by traders' confidence in governments' abilities to defend their currencies and to provide the legal infrastructure necessary for the credibility of contracts. I have shown, first, that when traders are assumed to contract in advance, and to rely on differentially risky currencies to conduct transactions, *laissez-faire* trade policies result in a redistribution from the country with the least-trusted currency to the country whose currency is perceived to be less risky. Moreover, *laissez-faire* trade policies are suboptimal from a social welfare perspective; policies consistent with those commonly advocated by the developing world, such as capital controls and preferential pricing favoring developing countries can actually be welfare-enhancing. The behavior of international economic institutions, then, is more aptly depicted by the realist perspective: institutions are means by which the most powerful countries in the international system impose their preferences on less powerful countries, regardless of the implications for the collective interest. The argument rests on the assertion that currencies of the developing world are perceived as being riskier than those of developed countries, a proposition I test in the following chapter. Moreover, it has testable implications for countries' preferences regarding currency controls.

CHAPTER IV

EMPIRICAL TESTS

It is a common lament of trade theorists that the foundations of modern trade theory cannot be subjected to direct tests: "...not all useful theory is linkable to observable phenomena. Proofs of the static gains of trade fall into the unrefutable category yet these are some of the most important results in all of economics." (Leamer and Levinsohn, 1995: 1342.) The predictions of comparative advantage involve price differences under autarky and free trade, and if there are indeed gains from trade, the autarkic state is not observed. Empirical trade theory, then, has focused on the assumptions underpinning comparative advantage; rather than measure the predicted social welfare gain from trade in the presence of comparative advantage, researchers have devoted their attention to measuring possible sources of comparative advantage (such as cross-national differences in factor endowments and technology) and examining the correspondence between patterns of observed trade and the suspected sources.

Like comparative advantage, the model presented in the previous chapter is not amenable to direct tests. The reasons are similar. First, I derived the real-side implications of currency risk premiums: they introduce a dynamic inefficiency problem. Second, if risk premiums are systematically related to countries' political capacity, they lead to a redistribution in favor of the more powerful country. Apart from the

difficulty of measuring social welfare, if the model is correct, and if national leaders able to choose policies that promote national welfare, we expect them to intervene to stabilize their currency prices. *Ceteris paribus*, then, transactions involving freely floating currencies bearing very different risk should be relatively rare. Moreover, countries whose currencies are predicted to have large risk premiums are those most likely either to have no forward market at all or to intervene in some way to minimize the premiums paid. Any observable unlikely events, then, are likely to represent only the low end of the distribution.

Fortunately, the overall volume of currency transactions is astonishingly high. In its 1998 triennial report, the Bank for International Settlements values the average volume of international currency exchanges in April of 1998¹ at 1.5 trillion U.S. dollars *daily*; approximately 60% of these exchanges involved forward trades. (BIS, 1998:2) Turnover in emerging market currencies is both substantial and growing rapidly, doubling from 10 billion U.S. dollars daily in 1995 to 23 billion U.S. dollars daily in 1998. (Federal Reserve Board of New York, 1998:4) Rare events, then, are sufficiently numerous to permit analysis.

The second problem is more serious, but tractable. Countries whose currencies are predicted to have large risk premiums are those most likely either to have no forward market at all or to intervene in some way to minimize the premiums paid. As a result, any analysis of observed risk premiums involves study of only the low end of the distribution.

Despite the difficulty of direct tests, the foregoing discussion suggests a testing strategy analogous to that used by researchers studying comparative advantage. While the welfare losses argued to result from currency risk premiums cannot be directly measured, the source of the welfare losses – the risk premiums themselves,

¹ In its triennial surveys, conducted in 1989, 1992, 1995, 1998 and 2001, April is always the month chosen for study.

can be. In the first part of the chapter, then, I test the prediction that developing countries' currencies have larger risk premiums attached to them than currencies of developed countries do. Ordinary least squares analysis of the relationship between currency risk premiums and political capacity should understate the size of the relationship because of the censoring problem. Tobit estimates, estimates that use information about the censored observations, should be more accurate.

Second, in the same way that researchers studying comparative advantage gauge its effects by examining behavioral patterns resulting from the predicted social welfare gains, I examine currency market interventions that I expect should arise as means of evading potential welfare losses. In particular, I use predicted values from the preceding tobit analysis to predict the implementation of exchange controls and the type of currency regime imposed.

Key constructs and their measures

Currency risk premiums

The notion of a currency risk premium derives from the emergence of two different prices at which currencies can be exchanged at a future date. A trader who knows she will need to convert pesos to dollars three months from now, for example, can commit to the trade now at the forward rate, $F_{t,t+1}$, the dollar per peso rate at which pesos can be converted three months in the future. She need not, however, make an advance commitment; she can wait three months and make the exchange at whatever spot rate, S_{t+1} , obtains at that time. Surprises are anathema to most financial managers, whose success depends on matching cash outflows to cash inflows in such a way that liquid assets – which typically earn little or no return – are minimized. Currency futures are a means of avoiding surprises.

According to rational expectations, and assuming that traders are risk-neutral (this latter assumption seemingly belied by the fact that forward markets exist at all), the forward rate should be equal, on average, to the realized spot rate. If this were not the case, an arbitrage opportunity would exist. Suppose, for example, that the forward rate were consistently higher than the realized spot rate. Then currency traders could profit from committing to buy dollars in exchange for pesos at the current forward rate, and trading them back the same day at the realized spot rate. The resulting demand for pesos forward and dollars future-spot would drive prices back to the $F_{t,t+1} = S_{t+1}$ equilibrium. In fact, literally hundreds of empirical studies have rejected this “forward rate unbiased” hypothesis.² Explanations for the difference fall into three general categories: currency risk premiums, “peso problems” – which I argue are essentially risk premiums, for my purposes, and forecast errors.³

² See Hodrick (1987), Levich (1995), Lewis (1995) and Engel (1996) for reviews. Tests of whether the forward rate is an unbiased predictor of the realized spot rate are also conducted under the rubric of “tests of market efficiency.”

³ Currency risk premiums can also be derived from the covered interest parity condition. In free markets, it is argued, equilibrium currency prices will reflect an arbitrage condition: the return from a domestic asset (such as a U.S. government bond) should be the same as the return from a foreign asset (e.g., a bond issued by the Mexican government), once all the needed currency conversions are completed. The adjustment process is best understood by thinking about what would happen if the arbitrage condition were not met. Suppose, for example, that the spot and forward rates for dollars and pesos were such that American investors could profit from buying pesos at the current spot exchange rate, investing in Mexican bonds, and committing in advance to converting the peso returns back into dollars at the current forward exchange rate. Then demand for current pesos and future dollars should increase, pushing the spot and future exchange rates in directions that eliminate the expected profit.

More formally, assume the following notation:

$i_{\$}$ the rate of return (interest rate) on U.S. government bonds.

i_{p} the rate of return (interest rate) on Mexican government bonds.

S_t the spot exchange rate, in dollars per peso, at time t .

$F_{t,t+1}$ the forward exchange rate, in dollars per peso; i.e., the current price, in dollars, of pesos delivered

Then at the end of one period, a \$1 investment U.S. bonds returns

$$\$1(1 + i_{\$}),$$

while a one-period investment in Mexican bonds returns

$$\$1 \frac{1}{S_t} (1 + i_{\text{p}}) F_{t,t+1}.$$

The term “risk premium” is often used quite narrowly in this literature, to refer to the extent to which the bias in forward rates can be explained by past exchange volatility. Typical findings suggest that past variability explains some, but not all, of the bias. Moreover, the “Fama result” indicates that the variability of the excess return is much higher than the covariance between the expected spot rate and the excess return, indicating that risk premiums, as the term is used here, can explain only part of the *variance* of the excess return. It is worth noting, however, that these results remain consistent with the possibility of time-varying risk premiums.

The term “peso problem” derives from the drastic change in the price of the Mexican peso when its peg to the U.S. dollar was dropped in 1976. In general, the term is applied to cases where a discrete jump in prices or change in currency regimes is possible. I have used the term “risk premium” in my presentation to refer to both risk premiums in the narrow sense described above and to peso problems, for two reasons. First, the peso problem is closely connected to what we typically think of as country risk – the possibility that governments will make a policy change that has drastic effects on the exchange rate and whose timing is not fully anticipated by the market. Second, and related, my interest is in cross-national variation of the bias in forward rates. Country risk is of little use in typical studies because they are invariably studies of a single currency over time (or separate studies of two or

Assuming the arbitrage conditions hold, the two terms are equated. Rearranging terms and subtracting one from each side yields the covered interest rate parity condition,

$$\frac{F_{t,t+1} - S_t}{S_t} = \frac{i_s - i_p}{1 + i_p}$$

(The denominator on the right hand side is often dropped, since for short periods of time $1 + i_p \approx 1$.)

I have not adopted this approach for two reasons. First, it is based on the premise that all differences between forward and expected spot rates are attributable to cross-national differences in interest rates on assets that are identical in every other respect, a condition which is rarely met in practice. Second, early studies indicating that the parity condition was indeed a useful guide for pricing forward contracts were later shown to be driven by a tautology – banks were plugging current spot prices and interest rates on government securities into the interest rate parity condition to decide upon the forward rate to charge. (Deardorff, 1979; Levich, 1981)

three currencies over time); when there is substantial variation in country risk in such settings, it enters as random shocks rather than as a systematic component. Indeed, the few studies of the impact of political factors on the bias in forward rates are event studies. (Christodoulakis and Kalyvitis, 1997; Bernhard and LeBlang 2002) Moreover, with rare exceptions, the studies that form the bulk of this literature are based on G7 countries, where country risk is uniformly low. Underpinning my theory is the notion that politically-related “disturbances” of this sort are systematically much higher in developing countries than in developed countries.

Finally, there is an emerging literature raising the possibility of forecast errors as a source of the bias in forward rates. The unavailability of relevant information may cause market traders to systematically overestimate future spot prices. This is the least satisfying of the three explanations, as it implies that traders are unable to recognize or correct their own systematic errors.

It is important to remember that exchange rates always involve the price of one currency in terms of another. I am using currency prices reported in terms of U.S. dollars. Since the dollar is a relatively strong currency, the “forward rate biased” observed in rates based on the dollar will be positive for most countries, indicating a risk premium. Currencies for which the reverse is true are said to trade at a discount. It is equivalent to suggest, in these latter cases, that there is a risk premium attached to the U.S. dollar. My first set of hypotheses, then, involves the expected sign of the risk premiums attached to different currencies:

Hypothesis 1: *I expect to find a positive risk premium, on average, attached to the currencies of developing countries. Risk premiums may be negative (i.e., discounts) or zero for currencies of other developed countries active in the world trading system.*

Political Capacity

The concept of political capacity was introduced by Organski and Kugler to call attention to a feature critical to comparing policy outcomes in developing and developed countries. While developed countries are typically highly institutionalized with well-developed levers for managing national policy, developing countries often lack the political infrastructure needed to reach national goals. Unlike economists, then, who tend to frame development in terms of shifts in sectoral production (from predominantly agricultural to predominantly manufacturing to heavily service-centered) increasing specialization, investment, and growth, Organski and Kugler conceptualized *political* development as the development of the political institutions and ties between political leadership and mass publics necessary for states to manage national affairs. This conceptualization of political development is agnostic with regard to regime type: "it is evident to us that a highly capable political system need not be free, democratic, stable, orderly, representative, participatory or endowed with any of the other desiderata" typically associated with competing conceptualizations of political development. (Organski and Kugler 1980:72) Rather, they envisioned political capacity as a measure of the extent to which national states are able to summon and manage the resources necessary to achieve national goals, without regard to normative judgments of the means employed.

Recent work in the area includes a measure for "political reach," the component of political capacity concerned with the ability of national states to manage domestic populations.⁴ The most widely used measure, though, is centered around "political extraction," the ability of governments to collect revenues necessary to implement desired policies. The motivation behind basing a measure of political capacity on tax collection goes beyond attention to instrumental requirements of enacting and enforc-

⁴ See Arbetman, 1994.

ing policies: "...taxes are exact indicators of governmental presence. Few operations of governments depend so heavily on popular support – or in fear of punishment. Revenues affect directly the lives of most individuals in society, and few activities are avoided so vigorously. Without some form of tax revenue, there is no national unity, and no control. Failure to impose and extract taxes is one of the essential indicators of governmental incapacity to obtain and maintain support." (Organski and Kugler, 1980:74)

Formal operationalization of political capacity is based on early work by IMF economists measuring "tax effort," a proposed indicator of whether or not loan recipients were trying to generate the revenues needed to keep up with payments. Expected tax revenues are calculated on the basis of countries' economic resources, including export potential, level of market-oriented agricultural productivity, the availability of mineral resources, and overall economic output. Differences between actual revenues and expected revenues were attributed to effort by the original IMF researchers, but argued by Organski and Kugler to represent differences in political capacity. While early work on political capacity was geared toward predicting war outcomes, it has since been used successfully to predict fertility and mortality rates (Organski, Kugler, Johnson and Cohen, 1984), Economic growth (LeBlang, 1997), black market exchange rate premiums (Arbetman and Ghosh, 1997) and domestic political violence (Kugler et. al, 1997).

I expect currency risk premiums to be negatively associated with political capacity for two reasons. First, economic policy in advanced polities is more likely to be determined and enforced according to regularized and more readily observable rules than is economic policy in less developed polities. Second, countries better able to mobilize resources for national goals are also more likely to be able to take measures needed to defend currency prices. Put another way, I expect that political capacity is a good predictor of cross-national differences in the ability of political actors to

manage economic affairs; my focus is on structural factors affecting exchange regime choice rather than on private incentives facing political actors.

Hypothesis 2: *Currency risk premiums will be negatively associated with political capacity.*

Political Intervention

Direct political intervention in foreign currency markets typically takes two forms. First, countries choose exchange rate regimes. In 1998, the International Monetary Fund classified regimes into five categories.⁵ “Independently floating” currencies are those whose prices are determined by market forces, with or without exchange controls in place. Monetary authorities make no attempt to set a particular level for exchange rates, but may intervene to prevent large fluctuations. “Managed floating” currencies are those for which monetary authorities actively intervene in the foreign exchange market without specifying or committing to a preannounced path for the exchange rate. In the period under study, the twelve countries that formed the European Monetary System were intervening to keep their exchange rates within specified ranges as they moved toward adoption of a common currency, the ECU. Similarly, four countries, Bahrain, Qatar, Saudi Arabia and the United Arab Emirates, do not formally peg their currencies to the U.S. dollar, but intervene in such a way that their currencies have very little flexibility *vis a vis* the U.S. dollar. Finally, many countries fix (peg) their exchange rates to a third currency. The currency chosen is often that of a dominant trading partner, frequently a former colonial power. Many African countries that were formerly French colonies, for example, peg their currencies to the French Franc. Lesotho, Namibia and Swaziland peg their currencies to the South African Rand.

⁵ The classification was expanded beginning in 1999.

It would be misleading, however, to classify exchange rate regimes without regard to a second form of intervention: exchange controls. Many countries whose exchange rate regimes are classified as freely floating restrict the international movements of their currencies, and as a result, official (legal) currency exchange rates are substantially different from black market exchange rates. This is an especially common pattern among the poorest of the developing countries. Ethiopia, Gambia, Ghana, Guinea, India, Malawi, Mongolia, Mozambique, Papua New Guinea, Rwanda, Sierra Leone, Somalia, Tajikistan, Tanzania, Uganda, Zambia and Zimbabwe are classified by the IMF as allowing their currencies to float freely, but they severely restrict international use of their currencies: black markets in hard currencies are common in these countries, and differences between black market rates and official rates are frequently quite large. Exchange controls, then are an important means of affecting exchange rates; analyses relying only on the IMF classification scheme may incorrectly infer non-intervention. The World Currency Yearbook classifies exchange control measures into four ordinal categories. Currencies classified as “free” are those whose international transfers are generally not subject to legal restrictions and which are not objects of black market transactions. Currencies classified as being under “liberal” control are those whose official rates differ from black market values; in these countries, however, ownership of foreign banknotes, bank balances abroad or gold is permitted, and exchange control violations may be subject only to minor punishment. Currencies classified as being under “Strict” control are heavily regulated by protective legislation and cannot be transferred abroad without special authorization. Ownership of foreign monies is always illegal and often subject to severe punishments. These currencies are generally the objects of active black market transactions. Finally, currencies classified as being under “dictatorial” control are those whose official rates are unrealistically high and are enforced by severe legislation. Statistics related to the money supply are generally treated as state secrets. These currencies are,

without exception, objects of black market transactions, and premiums on purchases of U.S. dollars can run well over 1000%. As of December 31, 1994, currencies of only two countries, Cuba and North Korea, fit into this latter category. (World Currency Yearbook, 1995).

Political Capacity and Currency Risk Premia

Two sets of analyses were conducted to test the claim that currencies with low levels of political capacity have higher risk premiums, on average, than currencies of countries with greater political capacity. In the first set, a pooled cross-section and time series model was used to estimate the equation

$$\text{Risk Premium}_i = \beta_0 + \beta_1 \text{Political Capacity}_i + \varepsilon_i.$$

Currency risk premiums are calculated as

$$\frac{F_{t,t+1} - S_{t+1}}{S_{t+1}},$$

where $F_{t,t+1}$ is the one-year forward rate at time t , and S_{t+1} is the spot rate realized one year later. The spot and forward rates used are daily closing rates, in U.S. dollars, reported by WM/Reuters and distributed by Datastream. Datastream provides three prices: bid, ask and the midpoint between the two; I have used the midpoint on the first day of each month in this study. Data from thirty-one countries are used in these analyses – consistent with the predictions of my model, forward markets do not exist for the majority of the countries in the developing world.

The direct measure of political capacity is currently being updated for the period 1996-2000, and therefore not available at this writing. Per Capita Gross National Product, in 1998 purchasing power parity adjusted dollars, is used as a proxy.

Pooling the data is problematic for two reasons. Within-panel autocorrelations are quite high, which raises questions about the statistical significance of the results.

Moreover, there is good reason to suspect that the relationship is not constant over time due to fallout from the Asian currency crisis. To address these concerns, I also present ordinary least squares results using data from each month separately.

Finally, these estimations do nothing to correct for a major problem with these data: if some currencies are perceived to be highly risky, and if there are not enough risk-acceptant traders willing to pay the associated risk premiums, trades will not occur at all. Risk premiums, then, are unobservable for these currencies. In this case, OLS estimates are biased and inconsistent; they are expected to understate the relationship between political capacity and currency risk premia.

To correct this problem, a second set of analyses is performed using Tobit. The technique was developed by James Tobin to study consumer purchases of durable goods. Because of the expense of consumer durables, consumers' desire to purchase them must reach some threshold before any purchases are observed. The dependent variable, in this case, is said to be "left-censored." Let y^* represent an index of consumers' desire for durable goods, and y_0 represent the threshold below which no purchases will be made. Rather than observing y^* , we observe only purchases, y , where

$$y_i = \begin{cases} y_i^* & \text{if } y_i^* > y_0 \\ 0 & \text{otherwise.} \end{cases}$$

Currency risk premiums, on the other hand, are expected to be right-censored. Let y_i^* represent the risk premium demanded by a trader asked to deliver a less risky currency in exchange for a risky currency; y_i^* is only observed if there are enough traders sufficiently risk-acceptant to complete the deal. Then

$$\text{Observed Risk Premium}_i = \begin{cases} y_i^* & \text{if } y_i^* < \text{some threshold} \\ \text{missing} & \text{otherwise.} \end{cases}$$

Tobit estimation provides expected values for risk premiums (in the current notation, expected values for underlying latent variable y_i^*) for all cases for which the independent variables are available. I will exploit this feature when examining the relationship between choices of currency interventions and currency risk premiums. In this case, any threshold higher than the highest observed risk premium is plausible, and as long as the choice of threshold is above this number, it does not affect the results of the analysis. A threshold of 2 was used in the estimations that follow.

Many readers may recall seeing tobit results for which reported marginal effects differ from the estimated coefficients. Remember that there are at least two types of marginal effects that may be of interest in any particular tobit analysis: the marginal effect of the independent variable (political capacity, in this case) on realized observations of the dependent variable, y_i , and the marginal effect of the independent variable on the underlying latent variable, y_i^* . The former is adjusted by the probability that a given observation will censored:

$$\frac{\partial E(y_i)}{\partial x_{ik}} = \Phi\left(\frac{X'\beta}{\sigma}\right)\beta_k,$$

where $\Phi(\cdot)$ is the cumulative normal distribution; X is the independent variable matrix, including the constant term; x is the independent variable of interest; β is the estimated coefficient vector and β_k is the estimated coefficient for the independent variable of interest. It is the latter, the marginal effect of political capacity on the full (latent) distribution of currency risk premiums that concerns us here. Since

$$\frac{\partial E(y_i^*)}{\partial x_{ik}} = \beta_k,$$

the estimated coefficient represents the marginal effect of interest in these analyses. (See Greene, 2000: 909-910 or Johnston and DiNardo, 1997:438 for reference.)

Table IV.1: Currency Risk Premiums and Political Capacity, Pooled Data, All Countries for which Forward Data Were Available

	Coefficient*10 ⁵	Panel-corrected Standard Errors *10 ⁵	Statistical Significance (two-tailed)
Constant	28254.7	14610.0	.053
Political Capacity	-1.92	.94	.041

n=31.

$R^2=.06$

Results

Risk premiums calculated for the 12 dates in 1998 ranged between -30% (Malaysia, March 1) to 199% (Indonesia, August 1). While the risk premiums associated with currencies of the four countries most directly affected by the Asian currency crisis were predictably unpredictable,⁶ the rest conformed to expectations. Risk premiums for relatively wealthy countries outside the EMS (Norway, Sweden and Switzerland, for example) were negative, indicating that the U.S. dollar was trading at a discount *vis a vis* these currencies. Risk premiums for EMS countries tended to hover around 0, and risk premiums for most developing countries were positive.

The results of the pooled estimation are presented in Table IV.1.

The coefficients and standard errors are multiplied by 10⁵ for presentational purposes. The coefficient estimate is sensible and strongly supports the hypothesis that

⁶ Intuitively, it might seem that the risk premiums for those currencies should be uniformly high. The argument that forward rates should be unbiased predictors of realized spot rates, though, is based on rational expectations, which suggests that in expectation, traders are able to anticipate currency rate fluctuations. The Asian currency crisis represented a major shock to the international financial system. Interventions in response to the crisis caused the spot rate of the four currencies most directly affected – Malaysia, Indonesia, Thailand and the Philippines – to jump dramatically in a very short period of time. The crisis, and therefore the interventions, were clearly not anticipated by market traders a full year in advance, and so for a few periods after the crisis the realized spot rates were actually much higher than the corresponding forward rates posted in the previous year.

currency risk premiums are negatively associated with political capacity. Its meaning becomes clearer if expressed in terms of currencies of three countries, a relatively wealthy country like Canada, an emerging economy, Czechoslovakia, and a very poor country, Sierra Leone. The coefficient of $-.0000192$ indicates that the currency risk premium attached to the Canadian dollar when exchanged for American dollars is approximately 9.4%. The risk premium levied on the Czech Koruna when exchanged for U.S. dollars would be about 24%; and the currency risk premium attached to the Sierra Leonean Leone would be around 40%.

While the result appears to be significant at the .05 level, within panel autocorrelations are consistently in the .7 to .95 range. This raises concerns that the estimated standard error is too small and significance is over-stated. There is not a good way to correct this in a panel setup: it is well-known that the Parks method is an asymptotic result, inappropriate for short time series, and since there is no cross-temporal variation in the independent variable, differencing the data (equivalent to maintaining the same specification but including a lagged dependent variable) is not an option.

Moreover, the possibility of temporal variation is of particular interest in this case, since the time period follows the Asian currency crisis rather closely. Ordinary Least Squares results for each month of data analyzed separately appear in Table IV.2.

The coefficients on political capacity, and their standard errors, are again multiplied by 10^5 for presentational purposes (standard errors are in parentheses below estimates). Estimates of the marginal effect of political capacity on currency risk premia are uniformly negative, ranging from $-.00000277$ to $-.0000352$. 11 of 12 coefficients are significant at the .01 (one-tailed) level or better. R^2 's range from .01 for January to .42 for November. Coefficient estimates tend to be relatively small and imprecise for the period January through May; the R^2 's range from .01 to .26 during this period. Estimated effects are larger and quite precise for the June through December period, and R^2 's range between .25 and .42. Similar analyses were conducted

Table IV.2: Currency Risk Premiums and Political Capacity, OLS Results, All Countries for which Forward Data Were Available

Month	Constant	Coefficient*10 ⁵	2-tailed p	R ²
January	.076 (.064)	-.277 (.489)	.576	.01
February	.239 (.063)	-1.44 (.479)	.005	.24
March	.121 (.051)	-.861 (.386)	.034	.15
April	.098 (.037)	-.662 (.284)	.027	.16
May	.125 (.038)	-.935 (.291)	.003	.26
June	.135 (.039)	-1.16 (.293)	.002	.35
July	.392 (.106)	-2.90 (.805)	.001	.31
August	.517 (.148)	-3.52 (.112)	.004	.25
September	.407 (.106)	-2.79 (.803)	.002	.29
October	.354 (.081)	-2.61 (.612)	.001	.39
November	.285 (.065)	-2.25 (.494)	.001	.42
December	.225 (.065)	-1.87 (.490)	.001	.33

n=31 for all months.

with various subsets. Restricting the sample to countries with free floating currencies did not change the results appreciably. Analyses omitting Malaysia, Indonesia, the Philippines and Thailand, the four countries directly affected by the Asian currency crisis, exhibited similar patterns overall, but with attenuated estimates of the coefficients for political capacity: all coefficients were negative, ranging from $-.00000408$ in February to $-.0000208$ in October. Ten of these twelve coefficients were statistically significant at the .05 level (one-tailed); five of these were significant at the .01 level (one-tailed).

These results are both reassuring and informative. The temporal variation in coefficient estimates and significance levels indicates that the currency crisis muddied the relationship between political capacity and currency risk premiums during the first part of 1998,⁷ leading to the borderline statistical significance. Better, the strong statistical significance of the results in the latter half of 1998 should alleviate concerns about the strong autocorrelation in the pooled analysis.

Tobit results for 1998 are presented in Table IV.3. Coefficients and their standard errors are multiplied by 10^5 for presentational purposes; standard errors are in parentheses below estimates. As expected, the tobit estimates of the effect of political capacity on currency risk premiums were much higher than the OLS estimates; they ranged from $-.0000140$ in February to $-.0000153$ in July. All were statistically significant at the .0001 level (two-tailed). Pseudo- R_2 's were consistently between .28 and .31.

Again, omitting the four countries directly involved in the Asian currency crisis reduces the estimated effect of political capacity on currency risk premiums.

A coefficient around 14.5, close to the value of the coefficients estimated for most months, indicates a currency risk premium in the neighborhood of 185% on Czech

⁷ See footnote 6 for further explanation.

Table IV.3: Currency Risk Premiums and Political Capacity, Tobit results

Month	Const.	Coeff. (x10 ⁵)	p-value (2-tailed)	Pseudo R ²
Jan	2.76 (.343)	-14.4 (2.43)	.0001	.28
Feb	2.67 (.322)	-14.0 (2.29)	.0001	.30
Mar	2.77 (.344)	-14.7 (2.44)	.0001	.29
Apr	2.77 (.345)	-14.7 (2.45)	.0001	.28
May	2.77 (.343)	-14.7 (2.44)	.0001	.29
Jun	2.80 (.347)	-15.0 (2.46)	.0001	.29
Jul	2.84 (.356)	-15.3 (2.50)	.0001	.31
Aug	2.78 (.345)	-14.8 (2.42)	.0001	.32
Sep	2.79 (.365)	-14.9 (2.53)	.0001	.31
Oct	2.70 (.322)	-14.5 (2.29)	.0001	.31
Nov	2.74 (.332)	-14.8 (2.36)	.0001	.30
Dec	2.78 (.341)	-15.0 (2.42)	.0001	.29

n=162 for all months, with 131 right-censored observations and 31 uncensored.

Koruna traded for U.S. dollars, and over 300% on Sierra Leonean Leones exchanged for Canadian dollars. While these numbers are quite sizeable, they are not incredible. The most recent numbers available for black market premiums on spot purchases of U.S. dollars with Czech Koruna and Sierra Leonean Leones are 27% and 13% respectively. (World Currency Yearbook, 1995:23) The risk premiums attached to dollar purchases contracted a full year in advance *should* be higher, by an order of magnitude, than the spot black market premium. And remember that the advantage of the tobit model is the ability to estimate risk premiums for transactions that would never occur.

Two important notes of caution are in order. As mentioned in reference to the OLS results, coefficients are attenuated by about 1/2 when the countries directly affected by the Asian currency crisis are omitted from the sample. I have chosen to present results involving the full sample anyway for several reasons. First, post hoc decisions to delete potential outliers tend to have an ad hoc quality to them. Second, at any given time, there is some nonzero probability that countries in a given sample will be experiencing some sort of economic crisis; it is not obvious that systematically removing extreme cases from analysis results in a more accurate picture of currency risk premiums on average. Third, the four countries involved are among the poorest who allow their exchange rates to float while imposing minimal or no exchange controls. Dropping them from the analysis truncates the independent variable, then, and so it is not clear that their influence is due purely to the currency crisis.

These doubts are best resolved, I think, by replicating the analysis with data from ensuing years, as the data become available.

Currency Risk Premiums and Political Intervention in Currency Markets

To test the hypothesis that the choice of exchange rate regimes can be explained in large part by riskiness attributed to national currencies by market traders, expected risk premiums were generated for all countries in the study using the tobit results described previously. November estimates were chosen for the current analysis on the basis of the high R^2 in the OLS results; since political capacity explains more of the variation in currency risk premiums in this month than in any other, measurement error in the expected risk premiums should be the smallest. The remaining measurement error, of course, is expected to bias the results against any findings; measurement error in independent variables results in attenuated estimates of coefficients.

Exchange rate regimes were classified into six categories, the five IMF classifications⁸ and a separate category for countries imposing strict or dictatorial exchange controls, regardless of their IMF classification. The baseline category for the multinomial logit results that follow is free floating (with neither strict nor dictatorial exchange controls) – currencies classified as free floating by the IMF and listed by the *World Currency Yearbook* as having either liberal or no exchange controls.

There are, then three obvious intervention categories: managed floating, pegged, and exchange controlled. As these represent, in that order, progressively more severe forms of intervention, I expect the relationship between their implementation and currency risk premiums to be progressively stronger:

Hypothesis 3: *The association between estimated currency risk premiums and political intervention will be progressively stronger as the form of intervention becomes progressively stronger.*

Predictions concerning the last two IMF categories, the 4 oil economies and the

⁸ Free floating, managed float, pegged, EMS countries and the 4 oil countries.

countries in the EMS, are less clear. There is a good argument for lumping both with the countries that allow their currencies to float freely. EMS countries' choice to keep their currency prices within narrow bands of each other represented not a long-term choice of fixed exchange rates, but a transitional measure on the way to adoption of a common freely floating currency. Similarly, the the four Arab countries whose currency prices tend not to fluctuate relative to the U.S. dollar are not officially pegging their currencies; the consistency is driven more by their trade patterns than by any explicit currency policy. I have, conservatively, left them as separate categories in this analysis. I expect them to look more like the countries with freely floating currencies than the countries that pursue interventionist policies.

Hypothesis 4: *The relationship between estimated risk premiums and membership in the two non-interventionist groups will be more similar to the relationship between estimated risk premiums and the choice to freely float currencies than to the relationship between estimated risk premiums and the interventionist choices.*

Results

Coefficient estimates from the multinomial logit are presented in Table IV.4.

The coefficients for the interventionist categories are in the hypothesized direction, and the magnitudes scale as predicted: the size of estimated currency risk premiums is an increasingly good predictor of countries' choice to impose a managed float, to move to a peg, and to enact exchange controls, respectively. The coefficients for the managed float and pegged categories are not statistically significant; the coefficient for the exchange control equation is significant at the .001 level.

Logit coefficients do not have the same straightforward interpretation that ordinary regression coefficients do, both because they involve a nonlinear functional form and because the dependent variable is a 0/1 variable, with the numbers assigned

Table IV.4: Exchange rate regimes and predicted risk premia, Multinomial Logit results

(Baseline category is freely floating currencies, no exchange controls)

Regime	Constant	Coefficient	odds ratio	p-value(2-tailed)
EMS	1.17 (.66)	-1.61 (.634)	.200	.01
Oil	-1.44 (1.15)	-.166 (.72)	.847	.82
Managed Float	-0.83 (.814)	0.43 (.44)	1.54	.31
Pegged	-1.39 (.972)	0.50 (0.52)	1.65	.33
Exchange Controls	-3.00 (1.19)	1.89 (0.56)	6.62	.001

LR chi-squared, 5 d.f. = 46.40, $p < .0001$. $n=88$.

arbitrarily.⁹

As an analogue to marginal effects, then, Table IV.5 provides odds ratios indicating the probability of moving from a free floating currency regime to each of the three alternative regimes as risk premiums increase from the expected risk premium associated with the United States dollar to the expected risk premiums associated with currencies of three representative countries, Canada, Czechoslovakia and Sierra Leone.

The model predicts that Canada is 1.13 times as likely as the U.S. to adopt a managed float rather than a free float; it is 1.15 times as likely as the U.S. to adopt a peg, and 1.70 times as likely to maintain a free floating regime with exchange controls. An emerging market country like Czechoslovakia, in comparison, is estimated to be

⁹ Multinomial logit is most easily conceived as several single logistic regression equations – in this case, 5 equations, each of which uses “freely floating” as the “0” case.

Table IV.5: Odds ratios for three representative countries, based on the analysis presented in Table IV.3

	Canada vs. U.S.	Czechoslovakia vs. U.S.	Sierra Leone vs. U.S.
Managed Float	1.153	1.88	3.23
Pegged	1.15	2.09	3.92
Strict/Dict. Exchange controls	1.70	16.1	174.1

1.88 times more likely to adopt a managed float than the U.S. is, 2.09 times more likely to adopt a peg, and 16.1 times more likely to allow its currency to float freely but to impose exchange controls. A very poor country like Sierra Leone, on the other hand, is estimated to be 3.23 times more likely than the U.S. to adopt a managed float, 3.92 times more likely to adopt a peg, and 174.1 times more likely to allow its currency to float freely but to adopt exchange controls.

Also as predicted, the relationship between currency risk premiums and regime choice for EMS countries and the oil economies is more similar to the relationship for countries that allow their currencies to float freely than to the relationship for countries choosing interventionist regimes. The coefficient for the estimated risk premium for EMS countries is negative, in fact, and statistically significant at the .01 level; not surprisingly, negative currency risk premiums (or positive discounts) are associated with EMS membership. The coefficient for the estimated risk premium for oil countries is very close to zero and not statistically significant; currency risk premiums provide no basis for distinguishing countries that float their currencies freely from those that behave as the oil economies do.

Finally, predicted regimes were estimated as the most probable regime calculated for each country. A crosstabulation of predicted vs. actual regime types is presented in Table IV.6, although the results are somewhat misleading.

Table IV.6: Predicted vs. Actual Currency Regimes, based on the model presented in Table IV.4

		Actual						
		EMS	Oil	Free Float	Man. Float	Pegged	Exch. Control	Total
Predicted	EMS	10	0	6	2	1	1	19
	Oil	0	0	0	0	0	0	0
	Free Float	2	2	2	1	2	2	11
	Man. Float	0	0	0	0	0	0	0
	Pegged	0	0	0	0	0	0	0
	Exchange Controls	0	1	8	11	6	31	57
Totals		11	3	16	14	9	34	88

Table IV.7: Predicted vs. Actual Currency Regimes, based on the model presented in Table IV.4, with Interventionist categories grouped together

		Actual		
		Free Floating	Political Intervention	Total
Predicted	Free Floating	22	9	31
	Political Intervention	9	48	57
Totals		31	57	88

Since there is only one explanatory variable in the multinomial logit model, only baseline and extreme categories will be predicted: that is, the model classifies all countries as EMS members, countries with freely floating currencies, and countries with exchange controls. 10 of 12 EMS members are correctly classified, then; 2 of 16 free floaters are correctly classified; and 31 of 34 countries with exchange controls are correctly classified. None of the oil economies, countries with managed floats or countries pegging their currencies are correctly classified.

Viewed another way, however, the model classifies regime choice with remarkable accuracy. Table IV.7 presents a cross-tabulation of predicted vs. actual behavior grouping the three interventionist categories together and the three non-interventionist categories together. These classifications are quite good: 70 of 88 cases, or 80%, are predicted correctly.

Conclusions

The empirical results present strong support for the model presented in Chapter 3 and for structural explanations of currency regime choice. While estimates of the relationship between political capacity and currency risk premiums from the months

closely following the Asian currency crisis of fall, 1997, are unstable, later estimates are consistently large and statistically significant. OLS estimates predict currency risk premiums on currency exchanges between advanced economies and emerging market economies at around 24%, and risk premiums on exchanges between developed countries and those considered basket cases around 40%. Tobit estimates, which use information about censored observations, suggest the risk premiums might be 4-7 times higher.

The size of the currency risk premiums predicted using the tobit model raises several questions. First, the possibility that estimates are inflated by the timing of the analysis – during the aftermath of the Asian currency crisis – should be examined by analyses of later time periods when those data are available.

Second, currency risk premiums in the range of 200 and 300% suggest that either the riskiness of currencies is a serious obstacle to trade, or that affected countries are successful in circumventing the problems associated with risky currencies. This topic is developed further in the closing chapter.

Finally, the model has mixed success in predicting the nature of exchange rate policy. On the one hand, its accuracy in predicting whether or not countries intervene in exchange rate pricing is remarkably good: correct classifications are made in 80% of all cases. The model is a poor predictor, however, of the nature of the political intervention. Some of the inaccuracy may be due to the crudeness of the estimation technique. It is indeed remarkable – and an indication of the strength of the underlying relationship – that cross-national estimates of currency risk premiums based on only 31 cases lead to results that conform so closely to the predictions of the model.

Without further study, however, it is not possible to refute the claim in the current literature that choices *between* types of political intervention are motivated in part by differences in legislative, electoral and/or partisan differences between countries,

although structural explanations are equally plausible. It is sensible to suspect, after all, that countries at very low levels of political development have neither the political infrastructure needed to manage a floating currency nor the credibility to maintain a peg, and are therefore more likely to rely on exchange controls. It is also widely recognized that structural differences between countries at very low levels of development and those with more advanced political systems impose different constraints on their political systems: governments in developing countries are less able to tax their citizens than are governments in countries with well-developed bureaucracies.

CHAPTER V

COOPERATION, COLLUSION AND COERCION

Portugal, having shaken off the Spanish yoke, had thrown herself... into the arms of England. Our government had persuaded itself that it required a powerful ally...

Its first endeavour is fruitless, if it is not followed by another to secure its freedom without the succour of a powerful ally, and thus falling on the other side into a similar state of slavery to that from which it is just delivered. (Carnota, 1843:118-120)

Summary

I began with a simple question: why is market liberalization advocated so strongly by the developed world and opposed equally vigorously by the world's poor? Especially in the past decade, the view that increasing levels of trade will promote economic growth in the third world has been a cornerstone of U.S. policy toward the developing world; "trade not aid" became the mantra of the 1990's. Moreover, this "Washington Consensus" position has become increasingly influential in multilateral institutions such as the the GATT and the WTO, the IMF and the World Bank despite the resistance of third world countries.

The origins of the developed world's position are clear. According to neoclassical trade theory, countries with different resource endowments can increase both their

collective wealth and their individual shares by specializing in production of the good that uses relatively more of the resource with which countries are relatively more endowed. It follows, then, that the developed world could benefit from specializing in the production of labor-intensive goods for export and from importing capital-intensive goods from the developed world, where the latter can be produced more efficiently. Indeed, by the very fact of LDC's' un-development – the thinness of their manufacturing sectors and the small range of goods they are able to produce – one might reasonably expect them to gain substantially from access to consumer goods supplied on the world market but not produced domestically.

The puzzle, in this context, is the third world's resistance to norms that are held to be not only in the best interest of the world as a whole, but particularly beneficial to developing countries. Moreover, reluctance to participate in the global economy has been much more than political rhetoric on the part of the developing world; trade between developing countries and developed countries is much lower than one might expect given the stark differences in their resource endowments.

Popular explanations tend to be ad hoc and unconvincing. Third world citizens, many argue, are victimized by the graft of their political leaders to an extent unparalleled in developed countries where public scrutiny is better institutionalized. (One might think that the savings and loan scandal happened in Burundi, or that Enron and WorldCom are based in Bangladesh.) More formally, comparative political scientists often distinguish between the “patron-client” nature of domestic politics in third world countries and the interest articulation role lobbyists play in more advanced polities. (The distinction seems not to be obvious to those concerned with campaign finance scandals in the United States, France, Japan, Germany and Israel.) Often, leaders of developing countries are dismissed as being merely backward. Consider an astonishing lead in a *Wall Street Journal* article rejecting currency speculator George Soros's role in the Asian currency crisis of 1997: “In faraway Hong Kong the prime

minister of Malaysia did his rain dance against modern finance, inveighing against George Soros and other ‘morons’ of the currency markets.” (Jenkins, Jr., 1997)

In a curious turn, the dogmatic adherence by multilateral economic institutions to market liberalization policies is increasingly being condemned by prominent mainstream financial experts as furthering the interests of particular agents in the developed world at the expense of the developing countries and global welfare. Financier George Soros has become a vocal critic of investor behavior in emerging markets, and Prime Minister Mahathir’s “rain dance” has been credited with turning Malaysia’s economy around while defying IMF advice. (Arnold, 2002. See also Eichengreen and Leblang, 2002.) Joseph Stiglitz decries the tendency of the IMF to defer to the financial community (2002); Jagdish Bhagwati coins the term “Treasury-Wall Street” complex, *à la* Eisenhower’s “military, industrial and scientific complex,” to make a similar point in his critique of unfettered capital markets (2000). Jeffrey Sachs, the architect of “shock therapy” in Poland, pointed to the IMF’s bailout of Russia as a clear example of a case where the “rescued” country was likely to benefit from IMF intervention a great deal less than foreign investors were:

The agreement yesterday is being hailed as a solution for Russia’s problems, but usually in these IMF agreements there’s very little comfort indeed at the end for the countries affected. There’s usually a lot of comfort for American investors and European investors because the Russian government gets the money to pay them off. But what the average Russian sees out of this is usually very, very little, often nothing.

And often, these IMF programs are so damaging that the consequences are actually hugely adverse. And after all, we’ve seen Jakarta burn this past spring in a very, very ill-conceived IMF program that just had it wrong and ended up contributing to a freefall of that economy.

I worry on the Russian side that while this is being hailed by the securities markets — those are the main beneficiaries — the real situation for the average Russians will continue to be bad, in some cases even worse, and I think politics in Russia’s going to continue to be quite hot up to the next presidential election. (Sachs, 1998)

In another critique of the IMF, Paul Krugman compares performance under capital

controls to the devastation of Indonesia's economy under IMF directive:

But when you face the kind of disaster now occurring in Asia, the question has to be: badly compared to what? After Mexico imposed exchange controls during the 1982 debt crisis, it went through five years of stagnation — a dismal result, but when your GDP has contracted by 50% stagnation looks like a big improvement. And think about China right now: a country whose crony capitalism makes Thailand look like Switzerland and whose bankers make Suharto's son look like J.P. Morgan. Why hasn't China been nearly as badly hit as its neighbors? Because it has been able to cut, not raise, interest rates in this crisis, despite maintaining a fixed exchange rate; and the reason it is able to do that is that it has an inconvertible currency, a.k.a. exchange controls. Those controls are often evaded, and they are the source of a lot of corruption, but they still give China a degree of policy leeway that the rest of Asia desperately wishes it had. (Krugman, 1998)

While economists have proffered several mechanisms to explain disparate aspects of the third world's experience with international trade, they tend to focus directly on the goods market. Prebisch's derivation of the declining terms of trade that plausibly ensue from specialization in agricultural products is a convincing partial explanation for the widening international inequality that has accompanied the third world's integration into the world trading system. Helpman and Krugman's incorporation of Lenin-Hobson assumptions of increasing returns to scale in production and imperfect competition in international markets provides a similarly persuasive account of barriers to entry faced by late developers.

My work differs by focusing on currency pricing as a mechanism affecting the gains from trade in perfectly free markets. I challenge the premise of market liberalism that intervention in the form of subsidies, tariffs and non-tariff barriers distorts international production from an efficient optimum that arises naturally in the absence of intervention. The neoclassical models, I note, omit consideration of the historic changes that have transformed the international system in recent years. The rapid decolonization of the 1950's and 1960's coupled with unprecedented and growing international interdependence has resulted in a system in which very wealthy,

highly institutionalized countries trade with much poorer countries at very low levels of political development.

The risks associated with holding currencies from the two sets of countries are so markedly different that the distinction between “hard currency” and “soft currency” is second nature to policymakers even as it remains foreign to the literature concerning gains from trade. By incorporating this feature into standard models, I conclude that perfectly free markets lead to a redistribution of global income favoring the most powerful countries in the system. Further, I find that liberalized markets are not consistent with the interests of the international community as a collective; I directly challenge the basis for the presumed moral high ground of economic liberalism.

The model is supported by empirical evidence presented in the previous chapter. The key assumption of the model – the argument that currency risk premiums are strongly related to countries’ political capacity – is confirmed by data indicating that differences in political capacity between countries such as, say, Canada and Sierra Leone, account for a difference in currency risk premiums of close to 300%. That the results are so strong, both substantively and significantly, despite the small number of cases in the data set, is a testament to the strength of the relationship.

Further, the model successfully predicts the likelihood that countries will intervene in their currency markets. As estimated risk premiums become increasingly large, countries are progressively more likely to adopt a managed float, to peg their currencies, or to impose exchange controls, in that order. This, along with the analysis of gains from trade presented in the third chapter, lends support to the view that third world countries’ tendency to intervene in their exchange markets is a completely rational response to the endogenous distortions they face in perfectly free exchange markets.

Moreover, the enormity of the predicted risk premiums for countries at particularly low levels of development suggest that these distortions either present a daunting ob-

stacle to trade, or that countries find ways to circumvent them. One obvious solution, which has interesting implications for subnational politics, is for developing countries to accept payment in the form of the less risky currencies. There is evidence that this indeed happens, and it raises interesting questions about the distribution of benefits from trade. In cases where local producers in developing countries accept foreign currency but pay their workers in local currencies, producers realize an additional profit. This incentive to produce for foreign, rather than local, markets may explain the resistance of workers in developing countries to globalization – a phenomenon at odds with comparative advantage as an explanation for trade patterns. Moreover, developing countries have complained that the activities of foreign multinational corporations seems to enrich the foreigners disproportionately. This might be expected if foreign multinationals invoice in their own currencies but pay local workers in local currencies. While these stories are merely speculative at this point, they suggest that further study of the currencies specified in trade contracts might be a fruitful line of inquiry.

This analysis of the effects of political development on currency pricing, then, explains several features of the political economy of trade between developed and developing countries that are typically viewed either as unrelated phenomena or merely as inexplicable anomalies. First, it suggests that LDC's pay a premium for imports purchased from more powerful countries. This is consistent with LDC's longstanding perception that imports endanger national growth – contrary to the neoclassical view which suggests that LDC's should gain from importing goods produced more efficiently elsewhere, and with the growing inequality between first-world and third-world wealth that has accompanied the third world's integration into the international trading system. The analysis also suggests, however, that third world countries can benefit from exporting to developed countries by accepting payment in hard currency – a finding consistent with the experience of the East Asian NIC's that benefitted

from export-led growth. Domestic effects of such a strategy, however, depend on how the benefit is distributed. If LDC exporters accept payment in hard currency but pay their workers in the weaker, local currencies, the benefit accrues disproportionately to business interests and may explain the widening *intranational* income inequality that has characterized the experience of Latin American countries in particular. It is also consistent with domestic politics of globalized trade in developing countries where, contrary to predictions of the Stolper-Samuelson theorem, market liberalization is pushed by the business elite and opposed by workers. Further, it suggests a mechanism by which foreign corporations setting up plants on LDC soil are able to expropriate more than their share of the gains from their direct investment. And finally, it suggests that third world leaders have a basis for intervening in the pricing of their currency that serves not only their private interests but may also promote the collective interest by neutralizing distortions associated with currency risk premiums.

Cooperation, Collusion and Coercion: From Neoliberal Institutionalism to Market Realism

The analysis also provides insights into the limitations of neoliberal institutionalism as a means of explaining the behavior of national actors and international economic institutions. Neoliberal institutionalism, recall, conceptualizes market liberalization as the cooperative outcome in a prisoner's dilemma game. The chief obstacle to market liberalization, in this view, is the ability to make credible commitments to reduce trade barriers. Neoliberal institutionalists suggest that the postwar international economic institutions, fashioned by the wealthiest countries in the world, were designed to serve the collective interest by removing the obstacles to international cooperation.

In such a setting, however, there is no explanation for asymmetric behavior on the part of the powerful and the weak. In Chapter One, I introduce a reformulation

of the neoliberal argument that redresses its two principle weaknesses: its failure to accord a role to power, and its inherent illogic. Rational actors, after all, should not shape institutions that promote the mutually cooperative outcome if they are able instead to shape institutions that promote the outcome in which they defect and their opponent cooperates. One might expect to see countries promote institutions that lead to the mutually cooperative outcome when countries are dealing with other countries that are roughly equal in power. In cases where countries are dealing with other countries that are much less powerful, though, we would expect to see the most powerful countries shape institutions that promote their own interests and exploit the weaker party. In the current context, the more powerful, developed world uses the multilateral economic institutions to promote market liberalization that favors its own welfare at the expense of the welfare of the developing world. The most powerful countries in the system cooperate to reach an outcome that is mutually beneficial, as none of them is powerful enough to coerce the others into the exploitative outcome. This cooperation can be classified as collusive, however, since it enforces an outcome that is unsatisfactory *vis à vis* third world countries, who would be better served by a trading system that did not penalize them for the riskiness of their currencies.

Coercion and Markets

The possibility that the imposition of market liberalization on developing countries is coercive deserves further exploration. Frequently, market liberalization is a condition the IMF imposes in exchange for bailouts of countries in dire economic straits. It is also curious that the zenith of the developed world's participation in trade negotiations occurred after the fall of the Soviet Union, and that many developed countries report feeling cheated in the Uruguay Round. Realists have speculated that once LDC's lost the ability to play the Soviet Union against the United States when in need of security guarantees, they faced increased pressure to accede to the

norms advocated by the U.S. To the extent that their very survival is threatened, though, LDC's participation in free markets is not truly voluntary. In his response to Pombal's complaint that the Methuen Treaty was coercive in the sense that Portugal could not refuse to sign for fear of losing British military protection, Smith suggested that security should be treated as an amenity not explicitly billed. Extortion is not considered by most modern thinkers, however, to fit in the same category as voluntary exchange, precisely because we tend not to think of survival as a commodity to be bought and sold like any other.

Distribution and Relative Gains

Moreover, even if we were satisfied that international markets were behaving efficiently and developing countries were not coerced into trade liberalization, it is not clear that the interests of developing countries would be served. While economists tend to focus on the potential absolute gains from trade, wealth is associated with power, and power is relative. Unless developing countries gain more from trade than the developed world does, liberalized trade does not provide a means for developing countries to narrow the gap between themselves and more powerful countries.

The latter is more than an arcane academic point. It would be irrational for the developing world to support international norms that reinforce – indeed, exacerbate – the existing distribution of power and wealth. This logic, unfortunately, applies not only to norms concerning international economic behavior, but also to norms concerning international security issues.

Consider, for example, the Nonproliferation Treaty of 1972, which attempted to restrict the possession of nuclear weapons to those countries that already possessed them. While viewed by the nuclear club as serving the collective interest, the accord was interpreted by many developing countries as an attempt by the superpowers to

freeze their dominance in place.¹ The difference in perspectives persists to this day. President Clinton, the self-described Neo-Wilsonian, was completely surprised by India's nuclear tests in May of 1998 and equally frustrated with Pakistan's response: "I cannot believe that we are about to start the twenty-first century by having the Indian subcontinent repeat the worst mistakes of the twentieth century."² A history lecturer at Delhi University nicely summarized prevailing thought on the Indian subcontinent: "Now we can talk as equals with other nuclear powers."³ Indian Prime Minister Atal Bihari Vajpayee was quick to parrot western excuses for nuclear armament - "In fact, Pakistan forced us to take the path of nuclear deterrence"⁴ - and remind President Clinton of the parallels between India's armament policy and that of the United States:

Our commitment to participate in *non-discriminatory*⁵ and verifiable global disarmament measures is amply demonstrated by our adherence to the two conventions on Biological and Chemical Weapons.⁶

The sharp undertone of Vajpayee's remarks may not be clear unless one remembers that while 149 countries had signed the 1986 Comprehensive Test Ban Treaty at the time that India commenced its nuclear tests, India, Pakistan and the United States were not among them — a fact seemingly forgotten even by the staff of the *New York Times*, whose headline announcing India's nuclear tests read "India Sets 3 Nuclear Blasts, Defying a Worldwide Ban." All three countries, however, were

¹ See, for example, Myrdal 1976.

² President Clinton, quoted in the NYT, 29 May 1998, A1 "Nuclear Anxiety: the overview; Pakistan, answering India, carries out nuclear tests; Clinton's appeal rejected" by John Burns.

³ Jaya Srivistava, quoted in the NYT, 12 May 1998, A14, "Nuclear Anxiety: the subcontinent; India glows with Pride as outrage rises abroad," by John F. Burns.

⁴ NYT, same 29May98 article as above.

⁵ my italics; need to note this

⁶ Indian P.M. Atal Bihari Vajpayee, in a letter sent 11May98 to President Clinton, as reprinted in the NYT 13May98, A14, "Nuclear Anxiety; Indian's Letter to Clinton on Nuclear Testing."

signatories to the conventions on biological and chemical weapons.⁷

These latter conventions are also viewed as discriminatory by many third world nations, where poison gases are frequently regarded as “the poor man’s nuke.” The parallel may not be obvious to those of us accustomed to thinking of the vehicles fit to deliver bombs one hundred times more powerful than those with which we leveled Hiroshima and Nagasaki as “Peacekeeper” missiles while referring to Saddam Hussein’s arsenal as “weapons of mass destruction.”⁸ Similarly, norms against international terrorism are a means of preventing relatively weak countries from threatening stronger adversaries with the only means they have available to them. One is reminded of suggestions that the guerilla warfare tactics employed by the Vietcong were somehow underhanded, suggestions which gave rise to a historical literature comparing guerilla tactics in the Vietnamese War with guerilla tactics in the American Revolution.⁹

It is this willingness of international actors to circumvent international security norms and the perpetual innovation in means of mass destruction that leads, in the long run, to a common interest in redressing any economic system that does not elevate the world’s poor from their unconscionable living conditions. For it is the

⁷ When the Test Ban Treaty was facing a Senate vote seventeen months later, President Clinton made no attempt to frame potential ratification as a noble gesture of international cooperation. Referring to the United States’ ability to test weaponry through computer simulations, he argued instead that “Since we don’t need nuclear tests, it is strongly in our interests to achieve agreements that can help prevent other countries like India, Pakistan, Russia, China, Iran and others from testing and deploying nuclear weapons.” (NYT 5oct99, pA1)

⁸ Little Boy, the bomb dropped on Hiroshima, is estimated at 12-15 kilotons. Fat Man, dropped on Nagasaki, was 22 kilotons. Peacekeeper (MX) missiles are equipped with 8-14 warheads of 335 kilotons each. (Cochran, Arkin and Hoening, 1984:32; Shafritz, Shafritz and Robertson, 1989:305-306)

⁹ Higginbotham describes this literature as the military analogue to an earlier literature concerning nonmilitary aspects of the American Revolution, literature in which “historical comparisons ... were often made to enhance the reputation of this nation and to show how other revolutionary movements were either good or bad depending upon whether they followed the Spirit of ‘76.” (1984:1-2). Interestingly, Selesky notes that even before the American Revolution, the British themselves — self-appointed arch defenders of all things civil — had demonstrated their willingness to suspend the military rules they purported to promote when they deemed it necessary, as in the Elizabethan conquest of Ireland and the Hanoverian suppression of the Jacobites in 1745. (1994:74-75.)

leader whose people threaten revolt in response to squalid poverty, the soldier who is as likely to starve as to die from enemy fire, and the parents whose children will not see adulthood who have the least stake in the international order and the strongest incentive to destroy it by any means possible.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Allison, Graham T. 1971. *Essence of Decision: Explaining the Cuban Missile Crisis*. Boston: Little, Brown.
- Arbetman, Marina. 1994. The Concept of Political Penetration. In *Proceedings of the Conference on Political Capacity and Economic Behavior*. Claremont, California: Center for Politics and Economics, Claremont Graduate School.
- Arbetman, Marina Deepak Ghosh. 1997. Political Capacity and Black Market Premiums. In *Political Capacity and Economic Behavior*, ed. Marina Arbetman Jacek Kugler. Boulder, Colorado: Westview Press.
- Arnold, Wayne. 2002. "Debt Rating of Malaysia is Upgraded." *New York Times*. Late Edition, Final, August 21 p. 1.
- Aron, Raymond. 1966. *Peace and War: A Theory of International Relations*. Garden City, New York: Doubleday and Company, Inc.
- Axelrod, Robert. 1970. *Conflict of Interest: A Theory of Divergent Goals with Applications to Politics*. Chicago: Markham.
- Axelrod, Robert. 1981. "The Emergence of Cooperation Among Egoists." *American Political Science Review* 75:306-318.
- Axelrod, Robert. 1984. *The Evolution of Cooperation*. New York: Basic Books.
- Axelrod, Robert Robert O. Keohane. 1985. "Achieving cooperation under anarchy: strategies and institutions." *World Politics* 38:226-254.
- Bacha, Edmar Lisboa Carlos F. Diaz-Alejandro. 1982. Tropical Reflections on the History and Theory of International Financial Markets. In *For Good or Evil: Economic Theory and North-South Negotiations*, ed. Gerald K. Helleiner. Toronto: University of Toronto Press.
- Bachman, Daniel. 1992. "The Effect of Political Risk on Foreign Exchange Bias: The Case of Elections." *Journal of International Money and Finance* 11:208-219.
- Baker, Regina M. 1997. "Market Realism: Political Power and the Gains from Trade under Market Liberalism." Paper presented at the Annual Meeting of the American Political Science Association.
- Baldwin, Robert E. 1969. "The case against infant-industry tariff protection." *Journal of Political Economy* 77:295-305.

- Bank for International Settlements. 1999. "Central Bank Survey of Foreign Exchange and Derivatives Market Activity, 1998."
- Baran, Paul A. 1957. *The Political Economy of Growth*. New York: Monthly Review Press.
- Baran, Paul A. Paul M. Sweezy. 1968. *Monopoly Capital: an Essay on the American Economic and Social Order*. New York: Modern Reader Paperbacks.
- Bernhard, William David Leblang. 2002. "Democratic Processes and Political Risk: Evidence from Foreign Exchange Markets." *American Journal of Political Science* 46:316-333.
- Bhagwati, Jagdish N. 1971. The Generalized Theory of Distortions and Welfare. In *International Trade: Selected Readings*, ed. Jagdish N. Bhagwati. Cambridge, Massachusetts: MIT Press.
- Bhagwati, Jagdish N. 2000. *The Wind of the Hundred Days: How Washington Mismanaged Globalization*. Cambridge, Massachusetts: MIT Press.
- Bhagwati, Jagdish N. T. N. Srinivasan. 1980. "Revenue Seeking: A Generalization of the Theory of Tariffs." *Journal of Political Economy* 88(6):1069-1087.
- Bhagwati, Jagdish N. T. N. Srinivasan. 1982. "Revenue Seeking: A Generalization of the Theory of Tariffs: A Correction." *Journal of Political Economy* 90(1):188-190.
- Bodenheimer, Susanne. 1971. "Dependency and Imperialism: The Roots of Latin American Underdevelopment." *Politics and Society* 1(3):327-357.
- Bueno de Mesquita, Bruce, David Newman Alvin Rabushka. 1985. *Forecasting Political Events: The Future of Hong Kong*. New Haven: Yale University Press.
- Bueno de Mesquita, Bruce, David Newman Alvin Rabushka. 1996. *Red Flag Over Hong Kong*. Chatham, NJ: Chatham House.
- Bush, George H. W. 1991. "Address Before a Joint Session of the Congress on the State of the Union." January 29.
- Carr, Edward H. 1964. *The Twenty Years' Crisis, 1919-1939*. Second ed. NY: Harper and Row. first published 1939.
- Choucri, Nazli Robert C. North. 1975. *Nations in Conflict: National Growth and International Violence*. San Francisco: W.H. Freeman and Company.
- Christodoulakis, Nicos Sarantis Kalyvitis. 1997. "Efficiency Testing Revisited: A Foreign Exchange Market with Bayesian Learning." *Journal of International Money and Finance* 16:367-385.

- Cochran, Thomas B., William M. Arkin, Milton M. Hoening. 1984. *Nuclear Weapons Databook, Volume 1: U.S. Nuclear Forces and Capabilities*. Cambridge, Massachusetts: Ballinger Publishing Company.
- conde da Carnota, John Smith Athelstane. 1843. *Memoirs of the Marquis of Pombal; with extracts from his writings, and from despatches in the state paper office, never before published*. Vol. 1 London: Longman, Brown, Green and Longmans.
- Deardorff, Alan V. 1979. "One-way arbitrage and its implications for the foreign exchange markets." *Journal of Political Economy* 87:351–364.
- Dell, Sidney. 1981. *On being grandmotherly: the evolution of IMF conditionality*. Princeton, New Jersey: International Finance Section, Department of Economics, Princeton University. Technical Report Number 144.
- Dowd, Maureen. 1996. "Ted's Excellent Idea." *The New York Times*. August 22, p. A19.
- Downs, George W., David M. Rockefeller, Randolph M. Siverson. 1986. Arms Races and Cooperation. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye. Princeton, New Jersey: Princeton University Press.
- Dubey, Muchkund. 1996. *An Unequal Treaty: World Trading Order after GATT*. New Delhi: New Age International Limited.
- Easton, David. 1953. *The Political System: An Inquiry into the State of Political Science*. First ed. New York: Knopf.
- Eichengreen, Barry David Leblang. N.d. "Capital Account Liberalization and Growth: Was Mr. Mahathir Right?"
- Engel, Charles. 1996. "The Forward Discount Anomaly and the Risk Premium: A Survey of Recent Evidence." *Journal of Empirical Finance* 2(3):123–191.
- Evans, Peter B. 1979. *Dependent Development: The Alliance of Multinational, State and Local Capital in Brazil*. Princeton University Press: Princeton.
- Evera, Stephen Van. 1986. Why Cooperation Failed in 1914. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye. Princeton, New Jersey: Princeton University Press.
- Federal Reserve Board of New York. 1999. "Foreign Exchange and Interest Rate Derivatives Market Survey: Turnover in the United States."
- Frank, Andre Gunder. 1967. *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil*. New York: Monthly Review Press.
- Gerschenkron, Alexander. 1962. *Economic Backwardness in Historical Perspective: A Book of Essays*. Belknap Press of Harvard University Press: Cambridge, Mass.

- Gilpin, Robert. 1975. *U.S. Power and the Multinational Corporation*. New York: Basic Books.
- Gowa, Joanne. 1994. *Allies, Adversaries, and International Trade*. Princeton: Princeton University Press.
- Gowa, Joanne Edward D. Mansfield. 1993. "Power Politics and International Trade." *American Political Science Review* 87:408–420.
- Greene, William H. 2000. *Econometric Analysis*. 4 ed. New York: Prentice-Hall.
- Grieco, Joseph M. 1988. "Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism." *International Organization* 42:485–507.
- Grieco, Joseph M. 1990. *Cooperation Among Nations: Europe, America, and Non-Tariff Barriers to Trade*. Ithaca, New York: Cornell University Press.
- Grieco, Joseph M. 1993. "The Relative Gains Problem for International Cooperation: Comment on D. Snidal and on R. Powell." *The American Political Science Review* 87:729–735.
- Gunder Frank, Andre. 1966. *The Development of Underdevelopment*. Boston: New England Free Press.
- Haggard, Stephan. 1990. *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries*. Ithaca, New York: Cornell University Press.
- Hanson, Carl A. 1981. *Economy and Society in Baroque Portugal, 1668-1703*. Minneapolis, Minnesota: University of Minnesota Press.
- Helleiner, Gerald K., ed. 1982. *For Good or Evil: Economic Theory and North-South Negotiations*. Toronto: University of Toronto Press.
- Helpman, Elhanan Paul Krugman. 1985. *Increasing Returns, Imperfect Markets, and International Trade*. Cambridge: Cambridge University Press.
- Herz, John. 1959. *Political Realism and Political Idealism*. Chicago: University of Chicago Press.
- Higginbotham, Don. 1984. Reflections on the War of Independence, Modern Guerilla Warfare, and the War in VietNam. In *Arms and Independence: The Military Character of the American Revolution*, ed. Ronald Hoffman Peter J. Albert. Charlottesville, Virginia: University Press of Virginia.
- Hobson, J. A. 1902/1965. *Imperialism: A Study*. Ann Arbor, Michigan: University of Michigan Press.
- Hobson, J.A. 1919. *Richard Cobden: The International Man*. New York: Henry Holt.

- Hodrick, Robert J. 1987. *Empirical Evidence on the Efficiency of Forward and Futures foreign Exchange Markets*. New York: Harwood Academic Publishers.
- Hoffman, Ronald Peter J. Albert, eds. 1984. *Arms and Independence: The Military Character of the American Revolution*. Charlottesville, Virginia: University Press of Virginia.
- Howard, Michael, George J. Andreopoulos Mark R. Shulman, eds. 1994. *The Laws of War: Constraints on Warfare in the Western World*. New Haven: Yale University Press.
- Iliasu. 1975. Cobden-Chevalier Commercial Treaty. In *Great Britain and her World, 1759-1914: Essays in Honour of W. O. Henderson*, ed. Barrie M. Ratcliffe. Manchester: Manchester University Press.
- International Currency Analysis, Inc. 1996. "World Currency Yearbook."
- International Monetary Fund. 1999. "International Financial Statistics Yearbook."
- Jacobson, Harold K. 1984. *Networks of Interdependence: International Organizations and the Global Political System*. second ed. New York: Knopf.
- Jervis, Robert. 1976. *Perception and Misperception in International Politics*. Princeton, New Jersey: Princeton University Press.
- Jervis, Robert. 1986. From Balance to Concert: A Study of International Security Cooperation. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye. Princeton, New Jersey: Princeton University Press.
- Johnson, Harry G. 1965. Optimal trade intervention in the presence of domestic distortions. In *Trade, growth and the balance of payments: Essays in honor of Gottfried Haberler*, ed. Robert Baldwin et. al. Chicago: Rand McNally.
- Johnston, Jack John DiNardo. 1997. *Econometric Methods*. Fourth ed. New York: McGraw-Hill.
- Jones, Ronald W. J. Peter Neary. 1984. The Positive Theory of International Trade. In *Handbook of International Economics, Volume I: International Trade*, ed. Ronald W. Jones J. Peter Neary. Amsterdam: Elsevier Science Publishers.
- Kahn, Joseph. 2002. "Losing Faith: Globalization Proves Disappointing." *The New York Times* . March 21, p. A8.
- Kemp, Murray C. 1964. *The Pure Theory of International Trade*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Kennedy, Paul. 1987. *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*. New York: Random House.

- Keohane, Robert O. 1988. "International Institutions: Two Approaches." *International Studies Quarterly* 32(4):379-396.
- Keohane, Robert O. Lisa L. Martin. 1995. "The Promise of Institutional Theory." *International Security* 20(1):39-51.
- Kindleberger, Charles P. 1970. *Power and Money: The Economics of International Politics and the Politics of International Economics*. New York: Basic Books.
- Knorr, Klaus. 1973. *Power and Wealth: The Political Economy of International Power*. New York: Basic Books.
- Krasner, Stephen D. 1985. *Structural Conflict: The Third World against Global Liberalism*. Berkeley, California: University of California Press.
- Krueger, Anne O. 1974. "The Political Economy of the Rent-Seeking Society." *American Economic Review* 64(3):291-303.
- Krugman, Paul. 1998. "Saving Asia: It's Time to Get Radical." *Fortune*. September 7.
- Kugler, Jacek, Michelle Benson, Andy Hira Dimitry Panasevich. 1997. Political Capacity and Violence. In *Political Capacity and Economic Behavior*, ed. Marina Arbetman Jacek Kugler. Boulder, Colorado: Westview Press.
- Leamer, Edward E. 1980. *Sources of International Comparative Advantage: Theory and Evidence*. Boston, Massachusetts: MIT Press.
- Leamer, Edward E. 1990. "Latin America as a Target of Trade Barriers." *Journal of Development Economics* 32:337-368.
- Leamer, Edward E. James Levinsohn. 1995. International Trade Theory: The Evidence. In *Handbook of International Economics*, ed. Gene M. Grossman Kenneth Rogoff. Vol. 3 Amsterdam: Elsevier Science.
- Leblang, David A. 1997. Political Capacity and Economic Growth. In *Political Capacity and Economic Behavior*, ed. Marina Arbetman Jacek Kugler. Boulder, Colorado: Westview Press.
- Leblang, David A. 2001. "To Defend or Devalue? The Political Economy of Exchange Rate Policy." Unpublished manuscript.
- Lenin, V. I. 1939. *Imperialism: The Highest Stage of Capitalism*. New York: International Publishers.
- Levich, Richard M. 1981. Exchange rates and currency exposure. In *Financial Handbook*, ed. E. Altman. New York: Wiley.

- Levich, Richard M. 1985. Empirical Studies of Exchange Rates: Price Behavior, Rate Determination and Market Efficiency. In *Handbook of International Economics*, ed. Ronald W. Jones Peter B. Kenen. Vol. 2 Amsterdam: Elsevier Science.
- Lewis, Karen K. 1995. Puzzles in International Financial Markets. In *Handbook of International Economics*, ed. Gene M. Grossman Kenneth Rogoff. Vol. 3 Amsterdam: Elsevier Science.
- Lindblom, Charles E. 1977. *Politics and Markets: The World's Political Economic Systems*. New York: Basic Books.
- Lipson, Charles. 1984. "International cooperation in economic and security affairs." *World Politics* 7:1-23.
- Lipson, Charles. 1986. Bankers' Dilemmas: Private Cooperation in Rescheduling Sovereign Debts. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye. Princeton: Princeton University Press.
- MacDonald, Ronald Mark P. Taylor. 1991. "Exchange Rates, Policy Convergence, and the European Monetary System." *Review of Economics and Statistics* 73(3):553-558.
- Markusen, James R. Randall M. Wigle. 1990. "Explaining the Volume of North-South Trade." *Economic Journal* 100:1206-1215.
- Martin, Lisa L. 1992. "Institutions and Cooperation: Sanctions during the Falkland Islands Crisis." *International Security* 16(4):143-178.
- Marx, Karl. 1853. The Future Results of the British Rule in India. In *The First Indian War of Independence, 1857-1859*, ed. Karl Marx Friedrich Engels. Great Britain: Lawrence and Wishart.
- Marx, Karl Friedrich Engels. 1959. *The First Indian War of Independence, 1857-1859*. Moscow: Foreign Languages Publishing House.
- Maxfield, Sylvia James H. Nolt. 1990. "Protectionism and the Internationalization of Capital." *International Studies Quarterly* 34:31-49.
- Meade, James E. 1955. *Trade and Welfare*. London: Oxford University Press.
- Mearsheimer, John J. 1995a. "The false promise of international institutions." *International Security* 20:5-49.
- Mearsheimer, John J. 1995b. "A Realist Reply." *International Security* 20(1):82-93.
- Montesquieu. 1748/1989. *The Spirit of the Laws*. Cambridge, Massachusetts: Cambridge University Press.
- Morgenthau, Hans J. 1948/1954. *Politics Among Nations: The Struggle for Power and Peace*. New York: Knopf.

- Morrow, James D., Randolph M. Siverson Tressa E. Tabares. 1999a. "Correction to 'The Political Determinants of International Trade'." *American Political Science Review* 92:931–933.
- Morrow, James D., Randolph M. Siverson Tressa E. Tabares. 1999b. "The Political Determinants of International Trade: The Major Powers, 1907-1990." *American Political Science Review* 92:649–661.
- Myrdal, Alva. 1976. *The Game of Disarmament: How the U.S. and Russia Run the Arms Race*. New York: Pantheon.
- Nelson, Gerald C. 1989. "Rent Seeking in North-South Agricultural Trade." *European Review of Agricultural Economics* 16:53–64.
- North, Douglass C. 1981. *Structure and Change in Economic History*. New York: W.W. Norton Co.
- North, Douglass C. Robert Paul Thomas. 1973. *The Rise of the Western World: A New Economic History*. New York: Cambridge University Press.
- Organization for Economic Cooperation and Development. 1994. *A Preliminary Assessment of the Impact of the Uruguay Round on Developing Countries*. Paris: OECD.
- Organski, A.F.K. 1958. *World Politics*. New York: Knopf.
- Organski, A.F.K. Jacek Kugler. 1980. *The War Ledger*. Chicago: University of Chicago Press.
- Organski, A.F.K., Jacek Kugler, Timothy Johnson Youssef Cohen. 1984. *Births, Deaths and Taxes*. Chicago: University of Chicago Press.
- Oye, Kenneth A. 1986a. *Cooperation Under Anarchy*. Princeton, New Jersey: Princeton University Press.
- Oye, Kenneth A. 1986b. Explaining Cooperation Under Anarchy: Hypotheses and Strategies. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye. Princeton, New Jersey: Princeton University Press.
- Oye, Kenneth A. 1986c. The Sterling–Dollar–Franc Triangle: Monetary Diplomacy 1929-1937. In *Cooperation Under Anarchy*, ed. Kenneth A. Oye. Princeton, New Jersey: Princeton University Press.
- Pollins, Brian M. 1989a. "Conflict, Cooperation, and Commerce: The Effect of International Political Interactions on Bilateral Trade Flows." *The American Journal of Political Science* 33:737–761.
- Pollins, Brian M. 1989b. "Does Trade Still Follow the Flag?" *The American Political Science Review* 83:465–480.

- Powell, Robert. 1991. "Absolute and Relative Gains in International Relations Theory." *The American Political Science Review* 85:1303–1320.
- Powell, Robert. 1993. "Response to J. Grieco." *The American Political Science Review* 87:735–737.
- Ratcliffe, Barrie M. 1973. "Napoleon III and the Anglo-French Commercial Treaty of 1860: A Reconsideration." *Journal of European Economic History* 2:582–613.
- Ratcliffe, Barrie M. 1975a. *Great Britain and Her World, 1759–1914: Essays in Honour of W. O. Henderson*. Manchester: Manchester University Press.
- Ratcliffe, Barrie M. 1975b. The Origins of the Anglo-French Commercial Treaty of 1860: A Reassessment. In *Great Britain and Her World, 1759–1914: Essays in Honour of W. O. Henderson*, ed. Barrie M. Ratcliffe. Manchester: Manchester University Press.
- Rawls, John. 1971. *A Theory of Justice*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.
- Ray, Edward J. Howard P. Marvel. 1984. "The pattern of protection in the industrialized World." *Review of Economic Statistics* 66:452–458.
- Ricardo, David. 1817. *The Principles of Political Economy and Taxation*. London: J. M. Dent and Sons.
- Rosecrance, Richard N. 1986. *The Rise of the Trading State: Commerce and Conquest in the Modern World*. New York: Basic Books.
- Ross, S. 1973. "The Economic Theory of Agency: The Principal's Problem." *American Economic Review* 63:134–139.
- Sachs, Jeffrey. 1984. "Russia's Economic Woes." *NPR Morning Edition*. July 15.
- Selesky, Harold E. 1994. Colonial America. In *The Laws of War: Constraints on Warfare in the Western World*, ed. Michael Howard, George J. Andreopoulos Mark R. Shulman. New Haven: Yale University Press.
- Sen, Amartya. 1986. *Welfare Economics and the Real World*. Memphis, Tennessee: P.K. Seidman Foundation. Acceptance paper for the Frank E. Seidman Distinguished Award in Political Economy.
- Shafritz, Jay M., Todd J. A. Shafritz David B. Robertson. 1989. *The Facts on File Dictionary of Military Science*. New York: Facts on File, Inc.
- Shaw, L.M.E. 1989. *Trade, Inquisition, and the English Nation in Portugal, 1650–1690*. Manchester: Carcanet, in association with the Calouste Gulbenkian Association.

- Smith, Adam. 1776. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Indianapolis, Indiana: Liberty Press.
- Snidal, Duncan. 1991. "Relative gains and the pattern of international cooperation." *The American Political Science Review* 85:701–726.
- Snidal, Duncan. 1993. "Response to J. Grieco." *The American Political Science Review* 87:738–743.
- Srinivasan, T.N. 1998. *Developing Countries and the Multilateral Trading System: from the GATT to the Uruguay Round and the Future*. Boulder, CO: Westview Press.
- Stein, Arthur A. 1984. "The Hegemon's Dilemma: Great Britain, the United States, and the International Economic Order." *International Organization* 38:385–386.
- Stiglitz, Joseph. E. 1974. "Incentives and Risk-sharing in Sharecropping." *Review of Economic Studies* 41:219–255.
- Stiglitz, Joseph E. 2002. *Globalization and Its Discontents*. New York: Norton.
- Talbott, Strobe. 1980. *Endgame: the Inside Story of SALT II*. New York: Harper and Row.
- Weiner, Tim. 2002. "More Aid, More Need: Pledges Still Falling Short." *The New York Times*. March 24, p. A4.
- Wolfe, Patrick. 1997. "History and Imperialism: A Century of Theory, from Marx to Postcolonialism." *American Historical Review* 102(2):388–420.