Deglobalization Scenarios: Who Wins? Who Loses?[*]

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Abstract

The process of globalization is being harshly criticized for a variety of reasons, but mostly because the income of large and/or vocal segments of the population of this and other countries is threatened by the dislocation and competition of trade and investment and by the inability or unwillingness of states to compensate the losers. Based on analysis with the International Futures Model, this paper concludes that if globalization halts or recedes the results will be profoundly negative for most countries and most income groups. While a retreat into protectionism may improve income equality in some countries, it will reduce incomes of both the poor and the rich and poverty headcounts will be increased. In addition, political instability will rise in a majority of countries and the probability of interstate war will increase. These results suggest that it would be far better to deal with the negative aspects of globalization directly by improving trade adjustment assistance, providing more secure access to health care, and negotiating new international agreements that benefit all countries.

KEYWORDS: globalization, international trade, protectionism, instability, inequality, poverty

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I.   Introduction

This paper explores the possible economic and political consequences if political support for globalization collapses in the United States and the rest of the world, resulting in higher tariffs, lower capital flows, and less migration.   After discussing the multidisciplinary theoretical and empirical literature undergirding the analysis, the paper presents simulation results from a global economic and political model that suggests that deglobalization would have results that few would wish for.

II.   Brief History of Globalization and Globalization Analysis

Globalization can be defined in different ways, but it is often referred to by economists and political scientists as the increased movement of goods, capital, and workers across national boundaries (see Bardham et al., 2006, or Greico and Ikenberry, 2003).   It is easy to document a post WWII rapid growth in trade in goods and services, large increases in capital flows and cross-border management of companies, and, at least in some areas, large movements of workers (Table 1). The post-war experience, however, marks neither the first wave of globalization, nor the first time people have wondered about the possibility of retreat from globalization.

Table 1
Globalization Indicators

	1950	2007
World Exports of Goods as Share of World GDP	5.5%	20.2%
Net Immigration (USA, Canada, Australia, New Zealand)	1870-1913	1974-2007
people, annual rate	420,000	1,170,000
Foreign Direct Investment as Share of World GDP	1982	2006
	5.2%	25.3%

Source: World Trade Organization, 2008.

Economic historian Jeffrey Williamson (2002) cites four epochs of globalization and deglobalization:

Epoch I   Anti-Global Mercantilist Restriction 1492-1820
Epoch II The First Global Century 1820-1913
Epoch III Anti-Global Retreat 1913-1950
Epoch IV The Second Global Century 1950-2002

Williamson and his colleagues and students and others (see in particular the collection of papers in Bordo, Taylor, and Williamson, 2003) have created a vast literature trying to explain why globalization happened in epochs II and IV, why the first globalization boom ended, and the impact of globalization and deglobalization on economic growth, income distribution, and political power. In condensed form, Williamson and his colleagues have found:

1) Globalization happened when transport costs rapidly declined making it economically efficient to boost international trade. In both globalization epochs, however, political leadership was critical in shaping global institutions and norms in a pro-trade direction (Williamson, 2002).

2) Globalization in both epochs had large pro-growth effects (Williamson, 2002) but the effects were spread very unevenly among countries and among groups within countries. Stiglitz (2005), among others, argues that trade liberalization in poor countries with badly performing market structures may cause unemployment increases and declining productivity.

3) Lindert and Williamson (2003) claim that despite the obvious correlation between globalization and rising world income inequality, "globalization probably mitigated the steep rise in income gaps between nations" that was occurring mainly because of the industrialization of Europe and North America in both globalization epochs.

4) Globalization has had no simple, uni-directional, impact on inequality within countries; some countries appear to have been helped, others hurt (Lindert and Williamson, 2003). The impact of globalization on within-country income distributions appears to depend on country-specific resource endowments and local policy decisions. While earlier studies (Lawrence and Slaughter, 1993) showed that increasing trade intensity had no great impact on the US income distribution, more recent work (Krugman, 2008) has suggested that the impact has not been as benign as previously thought.

5) The impact on growth of deglobalization in Epoch III was profoundly negative as the international division of labor "that had brought unprecedented levels of well-being and even affluence to the populations of Europe and some overseas outposts of Western Civilization, suddenly disintegrated with the outbreak of war" (Cameron and Neal, 2003, p. 339). The international division of labor had already been under grievous assault from the rise in global protectionism spurred by the Smoot-Hawley tariff legislation of 1930 (Irwin, 1998).

There is another large body of literature that has tried to relate trade and globalization to political outcomes, domestic political stability, and democratization. Ronald Inglehart and Wayne Baker claim that globalization, as it leads to growth and economic modernization, transforms societies in roughly predictable ways:

> Industrialization leads to occupational specialization, rising educational levels, rising income levels, and eventually brings unforeseen changes—changes in gender roles, attitudes toward authority and sexual norms; declining fertility rates; broader political participation and less easily-led publics. (Inglehart and Baker, 2000, p. 21)

Daron Acemoglu and James Robinson believe that the emergence and survival of democracy depends on the distribution of income and factor prices. Since poor countries are typically labor abundant, more trade tends to raise wages and lower returns to capital. Thus, if globalization leads to a reduction in the gap between the incomes of the poor and the rich, there should be less political strife because "the poor have less reason to vote for highly redistributive polices and democracy is less of a threat to the rich" (Acemoglu and Robinson, 2006, p. 322).

While Inglehart/Baker and Acemoglu/Robinson suggest that globalization may be a factor in the global movement toward democratic rule, Marshall and Goldstone (2007a) worry that it may promote instability. The current era of globalization is marked by the very large number of what they call anocracies, states that are neither fully consolidated democracies nor full autocracies. Anocracies occupy a middle ground between autocracies and fully-consolidated democracies and may be more likely to be destabilized by rapid economic and social change—either positive or negative change.

Jack Goldstone (1995, 1998, 2000, 2003, 2005) and his colleagues on the Political Instability Task Force[1] have produced an enormous amount of research trying to estimate the likelihood of state failure, using the State Failure Problem Set maintained by Monty Marshall and others at the Center for Global Policy, George Mason University. This work has shown that variables measuring economic performance, human welfare, trade openness, and regime type are important determinants of the probability of regime failure.

Lastly, this paper uses a large body of literature that relates international trade to interstate war. In particular, Edward Mansfield (2004) has found "that there is considerable evidence of an inverse relationship between commerce and war," that higher levels of systemic trade (not necessarily bilateral trade) seem to lead to less likelihood of great power war. Solomon Polochek (1980) and Erik Gartzke and Quan Li (2003) offer additional empirical support for this proposition.

This diverse body of literature, from economists, historians, political scientists, and sociologists suggests that globalization has had and will have large and systematic impacts on economic growth, social structure, and interstate

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[1] Formerly called the State Failure Task Force.

warfare. The problem is, the systematic impact is not linear, not uni-directional, and might differ greatly among countries, social groups, and time periods. Further, the above studies are, to a great extent, partial equilibrium analyses. They focus on one relationship, trade and economic growth, for example, with little analysis of how the interaction of trade and growth might have differing impacts on income inequality, social stability, and war depending on a country's initial polity, resource base, and economic structure.

III. Analyzing a Hypothetical Epoch of Deglobalization

This paper relies on the International Futures Model (Hughes and others, 2003, 2004, and 2006) to estimate a general equilibrium analysis of the impact of a potential reversal of the globalization process. The International Futures Model (IFs) is a global model representing hundreds of relationships within and among 183 countries. It has complex sub-models focusing on demographic change, economic growth, income distribution, agriculture, industrial structure, the environment, energy, trade, social stability, and interstate war. The behavioral relationships are based on theoretical and empirical specifications derived from the literature as well as empirical work by Hughes and his colleagues. The model has a long history of use by multiple institutions in assessing long-range global futures[2].

A. The Globalization Scenario and its Enemies

The globalization scenario in this paper is based on the IFs default global scenario as of September, 2008   It was compiled by the IFs team using an optimistic set of assumptions consistent with global analysis from the UN and the National Intelligence Council. It is also similar to the economic projections underlying the Intergovernmental Panel on Climate Change (IPCC) global warming analysis (2007).

The globalization scenario projects world economic growth averaging 2.0 per cent per capita to 2035 (Table 2), and the ratio of world exports of goods and services to world GDP rising from about 25 percent in 2005 to 33 percent in 2035. The growth forecast is based on assumptions of strong technological change brought about in the advanced economies by continuing research and development and in the developing countries from catch-up economic growth fostered by improved governance and efficiencies gained from expanded trade and financial linkages, and rising investment in human capital.   The world is

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[2]   See, in particular, National Intelligence Council (2004, 2008), United Nations (2004), UNEP (2007), Pardee Center (2009).

assumed to avoid great-power wars and suffers no major shocks from the environment or energy production shortfalls.

Table 2

The Globalization Scenario Compared to Recent History

	Average annual Growth in Real GDP per capita		Millions of People Living in Absolute Poverty		
	Last 30 Years 1976-2005	Next 30 Years 2006-2035	1980	2005	2035
World	1.7%	2.0%	1279	965	647
OECD	2.0%	1.7%			
Non-OECD	2.2%	2.7%	1279	965	663
of which					
China	6.1%	3.9%	457	131	0
India	3.4%	3.8%	355	163	25
Other	0.9%	1.7%	467	671	638

Source: GDP (in purchasing power parity terms) from Maddison (2003) and IFs projections. Poverty Headcount from Hillebrand (2008) and IFs projections.

But a deglobalized world is possible too. Anti-globalization policies could proliferate because powerful economic interest groups (unionized manufacturing workers in the United States, for example, or small-scale farmers in sub-Saharan Africa) feel their interests are being sacrificed for someone else's gain. Eichengreen and Irwin (2007) argue that, at best, there will be a long pause in US trade policies geared toward liberalization and that "past gains from liberalization will get whittled away as countries backslide on previous commitments (2007, p. 25). Worse, nations as a whole could find it compelling, as they did in the 1930s, to actively restrict imports in the hope of boosting domestic production. Ronald Findlay and Kevin O'Rourke, after reviewing 1000 years of trade history worry about the potential for a "nineteenth-century style antiglobalization backlash in rich countries" (Findlay and O'Rourke, 2007, p. 438). Or anti-globalization political activists in the third world who view the present international system as unjust could come to dominate the global policy agenda (Ocampo, 2004; Cardoso, 2006). For the purposes of this paper the exact source of the deglobalizing pressures is not critical because the paper will explore the impact of a set of generic policy changes. What happens to the global system if tariffs rise substantially, if international investment capital and aid flows are reduced, and migration diminishes? Is economic growth increased or decreased? Does poverty rise or fall?

Simulations with the International Futures Model give us a starting point for considering such a future. Compared to the assumptions in the globalization scenario, the primary deglobalization scenario assumes that a) tariff levels rise 33

percent, in all countries, over 5 years and remain at this elevated level, b) net foreign direct investment (FDI) and official foreign aid flows to the non-OECD countries fall to zero over five years and remain zero, and c) migration flows fall to zero between the OECD countries and the non-OECD countries.[3]

Over a thirty-year period, the model calculates that the total effect of these deglobalization shifts reduces world economic growth by almost a percentage point a year, more in the non-OECD countries than in the OECD. The global rise in tariff rates alone reduces world trade growth by about 2 percentage points per year and world economic growth by about 0.6 percentage points per year. The reduction in net FDI and foreign aid alone cuts non-OECD GDP per capita growth about 0.2 percent per year. The assumed migration cuts affect mainly the United States and Mexico on the one hand, and the European Union and its near neighbors on the other. In the US, reduced migration and then fewer births results in a US population of about 30 million fewer by 2035, and a reduction of about 3% in GDP from this change alone. The EU's 2035 population is about 17 million fewer than it is in the globalization scenario.

The model estimates these large falls in GDP growth because trade flows are linked to efficiency gains in production as posited in neoclassical trade theory literature (Krugman, and Obstfeld, 2006) and demonstrated in empirical research such as Estavadeordal and Taylor (2008). Capital and labor changes also affect production and productivity by the straightforward mechanics of the simple neoclassical growth model (Hubbard and O'Brian, 2006) which is embedded in the IFs model.[4] While the basic functional relationships between trade and growth are the same for each country, the actual impact of the deglobalization assumptions varies a great deal by country depending on each country's initial level of development and degree of globalization, its dependence on foreign capital and labor, and its industrial and wage structure.

The model projections tell us a great deal about relative gains and losses within countries and between countries, about change in inequality and poverty, and even about political stability, democratization, and peace and war. In short, deglobalization results in rising poverty headcounts and inequality increases in most but not all countries, a slight increase in average political instability, and a substantial increase in the risk of interstate war.

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[3] 2005 is the last year of observed data in the present version of the IFS model and is the base year for all simulations. The estimated changes between the end-point values of the scenarios are more meaningful in this kind of scenario work than projections of values for individual years.

[4] In these simulations the IFs model has been calibrated to produce a trade/growth effect close to the inverse of what Estavadeordal and Taylor found when they estimated the impact of Uruguay Round tariff cuts of about 25 percent on the economic growth performance of participating countries.

It should be noted, however, that these results are based on quantitative forecasts that rely on imprecise parameter estimates. In particular, the main parameter driving the economic results is the link between trade and growth. While this linkage between trade and growth has been a bedrock of economic theory at least since Ricardo and a fundamental concept of US policy-making at least since the end of World War II, empirical estimates of the magnitude or even the direction of the relationship for the US or any other country are not definitive. I have relied here on the recent quantitative work of Estavadeordal and Taylor because its research design is better suited to the kind of simulations undertaken here than other empirical work cited in the literature[5] and the results roughly conform with much of the evidence cited in Bordo et al (2003), but the empirics of the trade and growth relationship are far from settled[6] and thus, the conclusion from these simulations must be regarded as tentative.

B. Poverty and Inequality

Economists have used the Stolper-Samuelson (1941) theorem to show that trade is likely to have distributional effects on society, especially that the scarce factor of production (in the US case, labor) might be disadvantaged in favor of capital, and vice versa in a labor abundant country such as China. The IFs model captures distributional effects by tracing the impact of trade on economic output by sector, each sector employing differing sets of labor skills and capital intensity (Hughes and Hossain, 2003). In general, relative returns increase for skilled labor as the overall level of development increases and as manufacturing increases its share in total value added relative to agriculture. In these trade-restricting simulations, which tend to increase the relative size of the manufacturing sector in many of the non-OECD countries, we would expect the share of the work force engaged in manufacturing to increase, resulting in more highly paid workers and thus reducing poverty and income inequality. Reducing imports of manufactured goods and FDI, however, reduces technological advance especially in the poorer countries. Slower technological advance results in slower productivity gains and smaller wage gains in all sectors. How these conflicting forces affect incomes, poverty headcounts, and inequality depends on the interaction of many institutional and historical factors for each country represented in the model.

The overall results, however, are quite clear: while deglobalization may encourage poor countries to increase the relative size of the domestic manufacturing industry and this may shift the relative wage structure in a way that

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[5] See, for example, Bradford, Grieco, and Hufbauer (2006).
[6] See, for example, Rodriguez and Rodrik (1999).

increases overall equality (in 61 out of 155 non-OECD[7] countries the Gini[8] coefficient fell), the slower growth in productivity resulting from a slowing of international trade results in lower GDP growth, lower average income growth and higher poverty headcounts in all but a very few countries (Table 3).

Table 3
Effect of Deglobalization on the Non-OECD Countries: Economic Growth and Poverty

	Globalization Scenario	Deglobalization Scenario	Change
Average Annual Real GDP Per Capita Growth Rate (2006/2035)	2.7%	1.9%	-0.8%
Average Per Capita GDP in 2035 (2000 PPP $)	$10,664	$8,398	-21.2%
Millions of People living below $1 a day in 2035 (2000 PPP $)	663	836	173
Estimated Gini Coefficient for the Non-OECD in 2035	0.416	0.416	0
In the Deglobalization Scenario compared to the Globalization Scenario:			
Number of Non-OECD countries (out of 155)			
With Fall in Gini coefficent	61		
With Rising Real GDP Per Capita Growth Rates	9		
With Fall in Extreme Poverty Headcount	5		

Source: Estimates with the International Futures Model, Version 6.03

The results for Guatemala are typical. Imports of manufactured goods in the forecast period fall dramatically between scenarios, both in absolute terms and as a share of total imports. Domestic value added in the manufacturing sector rises very slightly in absolute terms, but productivity growth for the economy as a whole and in the manufacturing sector slows by about a half percentage point a year due to reduced competition and reduced capital flows. Overall GDP and wage growth slows, but wages fall relatively more in the high-skilled jobs because the slowdown in productivity growth is greater in sectors that are skill-intensive. In addition, returns to capital are lowered in this low-productivity environment. These three forces result in a shift in the income distribution in favor of the poor. The estimated Gini coefficient in 2035 is .573 vs. .584 in the globalization scenario. But this gain in equality comes at the expense of lower incomes for both the rich and the poor. Real GDP per capita in 2035 is 23 percent

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[7] The IFs model represents 183 different countries including all 31 countries now members of the OECD. For this paper, however, Turkey, Chile, and Mexico, are regarded as non-OECD countries because their level of economic development is so much less than the OECD average.

[8] The Gini coefficient is a widely-used measure of income inequality. Possible values range from 0, meaning the total income of a country is shared absolutely equally among the inhabitants, to 1.0, meaning 1 person absorbs all the nation's income. According to the World Bank's *World Development Indicators 2009*, the most recently observed Gini coefficients range from 0.25 in Sweden to 0.6 in Haiti, with the United States at 0.41.

less than in the globalization scenario and the number of people living in extreme poverty is 340,000 more.

The results are worse for China, a country whose growth has been dependent on exports of manufactured goods. In China, exports of manufactured goods are down 70 percent by 2035 and value-added by the manufacturing sector falls by 40 percent. Overall GDP growth averages 1.1 percent a year less than in the globalization scenario and average GDP per capita in 2035 is 37 percent less. This huge fall in income is not compensated by a rise in equality: the decline in manufacturing pushes more workers back into agriculture and the service sector which have more unskilled, low-wage jobs. The estimated Gini coefficient in 2035 is .489 vs. .483 in the globalization scenario.

The policy changes in the deglobalization scenario tend to increase the relative size of the manufacturing sector in the non-OECD countries that were not already deeply integrated into the globalized trading system. One hundred and five of the 155 non-OECD countries increase the relative size of their manufacturing sectors in the deglobalization scenario, but this rarely has positive national benefits. Only 33 countries increase the absolute size of their manufacturing sector and only 9 countries are able to raise their average GDP per capita. These nine are among the smallest, poorest, and least globalized countries in the world.[9] Only one country—Eritrea—is able to increase average GDP per capita, reduce inequality, and reduce its poverty headcount. For all the rest, the decrease in imports of manufactured goods and capital tends to reduce equality or average incomes or increase poverty, or, in most cases, all three because the growth-inhibiting aspects of trade and capital slowdowns overwhelm any positive distribution affects that may result from structural changes in the economy.

The United States is hurt much less than the non-OECD by deglobalization, but GDP per capita is still down almost 13% by 2035 (Table 4). Deglobalization is successful if the goal is to reduce income inequality (the Gini coefficient falls by .005) and to increase the share of manufacturing in the US economy (up by 3.6 percentage points). But the absolute size of the manufacturing sector is reduced because GDP and GDP per capita is so much less. The large cut in immigration helps raise the relative wages of low-skilled US workers, but since productivity gains are much lower, wages[10] in 2035 are about 9% lower.

The European Union (EU27) is also badly hurt. Real GDP per capita growth averages about 0.8 percentage point per year less than in the globalization scenario. The EU does not even enjoy the small gains the US records in reducing inequality. The EU is assumed to have much less immigration in proportion to population than the United States in the base case, thus there are fewer gains to be

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[9] Bhutan, Burundi, Comoros, Eritrea, The Gambia, Ghana, Sao Tome, Somalia, and Togo.

[10] Measured by value-added per worker (Table 4).

had by lower-skilled indigenous EU workers by shutting off the supply of immigrant labor.

Table 4
Effect of Deglobalization on the United States and the EU27

	Globalization Scenario	Deglobalization Scenario	Percent difference
United States in 2035			
GDP (billion 2000 $)	24,287	19,794	-18.5%
GDP per capita (2000 $)	66,150	60,290	-8.9%
Population (millions)	367.2	328.3	-10.6%
Gini Coefficient	0.402	0.397	
Share of Manufacturing Value			
Added in GDP	19.6%	22.2%	
Share of wage bill going to unskilled	62.5%	63.6%	
Mean value added per unskilled worker	61,402	55,687	-9.3%
EU27 in 2035			
GDP (billion 2000 $)	15,455	11,747	-24.0%
GDP per capita (2000 $)	31,270	24,600	-21.3%
Population (millions)	494.2	477.5	-3.4%
Gini Coefficient	0.338	0.337	
Share of Manufacturing Value			
Added in GDP	23.7%	23.8%	
Share of wage bill going to unskilled	63.1%	63.9%	
Average annual wage, unskilled worker	30,704	23,673	-22.9%

Source: Estimates with the International Furtues Model, Version 6.03
Note: Results above are shown in constant $ at 2000 market exchange rates. Results for all 183
countries at market exchange rates and in purchasing power parity terms are available from the author.

C. Political Instability

Combining concepts from Inglehart and Baker (2000), Acemoglu and Robinson (2006) and Williamson (2002), globalization, moving in tandem with economic development should lead to more democratization, more accountable governments, and more political stability. Using the work of Goldstone and his colleagues (1995), however, we know that countries (anocracies) intermediate between autocracies and fully consolidated democracies have more difficulty moving toward stability than either of the other two regime types. Thus estimating whether deglobalization will have positive or negative effects on the political stability of any particular country depends on a complex interaction of forces that the IFs model attempts to represent (Hughes, 2004).

The IFs model estimates the probability of regime failure for each country in each year. The starting point, based on Hughes' manipulation of the Political Instability Task Force Problem Set (2009), are probabilities in 2005 ranging from

0.1% for very stable regimes (mostly the rich democracies of the OECD) to 100 percent for regimes actually in the midst of an internal war (such as Afghanistan). The mean probability for instability in the 28 OECD countries is only 0.4% in 2005 but it is 20.3% in the 155 non-OECD countries.

The probability of regime failure---revolutionary wars, ethnic wars, genocides or politicides—is estimated as a function of economic performance, trade openness, regime type, and overall social well-being proxied by the infant mortality rate.[11] In the globalization scenario which posits high economic growth in most countries, increasing trade interdependence, improving public health, and a trend towards democratization, the global average probability of regime failure falls from 16.8 percent in 2005 to 14.9 percent in 2035.

In the deglobalization scenario the downward trend is arrested (Table 5). The global average probability for regime failure in 2035 rises to 17 percent, with almost all of the change coming in the non-OECD countries. Deglobalization affects economic growth and trade openness differently in each country. China, which has boosted its growth rate through globalization sees its trade openness fall relatively sharply in the deglobalization scenarios and it also suffers one of the biggest drops in GDP growth rates. These two factors, given the IFs framework for estimating political instability, result in one of the largest forecasted rises in political instability, 24 percentage points. The estimated increase would have been even greater had China been a less autocratic society, but in this framework China's high level of autocracy gives the regime more power to keep the polity intact. India suffers somewhat less of a fall in GDP growth and a much lower reduction in trade openness, and thus its estimated rise in the probability of instability is much less than China's.

A few countries, mostly in sub-Saharan Africa, are estimated to have slightly greater political stability with deglobalization. These countries are mainly those who are least-globalized to begin with and thus either find their GDP growth rates increasing slightly or at least find themselves relatively better off in comparison with their neighbors.

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[11] These are the variables that found most theoretical and empirical support in the first four major reports of the Political Instability Task Force (and its predecessor). More recent work from the Task Force emphasizes greater nuances in regime type using data sets on factionalism and discrimination. This more recent work has not yet been incorporated in the IFs model.

Table 5

Estimated Probability of State Failure Through Internal War

percent

		Globalization Scenario	Deglobalization Scenario
	2005	2035	2035
World	16.8	14.9	17.0
OECD(28)	0.4	0.3	0.4
Non-OECD(155)	19.7	17.6	20
Autocracies (36)	25.5	18.8	20.4
Anocracies (54)	16.4	16.7	17.0
Democracies (93)	13.6	12.4	15.7

Source: Estimates with the International Futures Model, Version 6.03

D. Interstate War

A long line of writers from Cruce (1623) to Kant (1797) to Angell (1907) to Gartzke (2003) have theorized that economic interdependence can lower the likelihood of war. Cruce thought that free trade enriched a society in general and so made people more peaceable; Kant thought that trade shifted political power away from the more warlike aristocracy, and Angell thought that economic interdependence shifted cost/benefit calculations in a peace-promoting direction. Gartzke contends that trade relations enhance transparency among nations and thus help avoid bargaining miscalculations.

There has also been a tremendous amount of empirical research that mostly supports the idea of an inverse relationship between trade and war. Jack Levy said that, "While there are extensive debates over the proper research designs for investigating this question, and while some empirical studies find that trade is associated with international conflict, most studies conclude that trade is associated with peace, both at the dyadic and systemic levels" (Levy, 2003, p. 127).

There is another important line of theoretical and empirical work called Power Transition Theory that focuses on the relative power of states and warns that when rising powers approach the power level of their regional or global leader the chances of war increase (Tammen, Lemke, et al, 2000). Jacek Kugler (2006) warns that the rising power of China relative to the United States greatly increases the chances of great power war some time in the next few decades.

The IFs model combines the theoretical and empirical work of the peace-through-trade tradition with the work of the power transition scholars in an attempt to forecast the probability of interstate war. Hughes (2004) explains how he, after consulting with scholars in both camps, particularly Edward Mansfield

and Douglas Lemke, estimated the starting probabilities for each dyad based on the historical record, and then forecast future probabilities for dyadic militarized interstate disputes (MIDs) and wars based on the calibrated relationships he derived from the empirical literature.

The probability of a MID, much less a war, between any random dyad in any given year is very low, if not zero. Paraguay and Tanzania, for example, have never fought and are very unlikely to do so. But there have been thousands of MIDs in the past and hundreds of wars and many of the 16,653 dyads have non-zero probabilities. In 2005 the mean probability of a country being involved in at least one war was estimated to be 0.8%, with 104 countries having a probability of at least 1 war approaching zero. A dozen countries[12], however, have initial probabilities over 3%.

The globalization scenario projects that the probability for war will gradually decrease through 2035 for every country—but not every dyad--that had a significant (greater than 0.5% chance of war) in 2005 (Table 6). The decline in prospects for war stems from the scenario's projections of rising levels of democracy, rising incomes, and rising trade interdependence—all of these factors figure in the algorithm that calculates the probabilities. Not all dyadic war probabilities decrease, however, because of the power transition mechanism that is also included in the IFs model. The probability for war between China and the US, for example rises as China's power[13] rises gradually toward the US level but in these calculations the probability of a China/US war never gets very high.[14]

Deglobalization raises the risks of war substantially. In a world with much lower average incomes, less democracy, and less trade interdependence, the average probability of a country having at least one war in 2035 rises from 0.6% in the globalization scenario to 3.7% in the deglobalization scenario. Among the top-20 war-prone countries, the average probability rises from 3.9% in the globalization scenario to 7.1% in the deglobalization scenario. The model estimates that in the deglobalization scenario there will be about 10 wars in 2035, vs. only 2 in the globalization scenario[15]. Over the whole period, 2005-2035, the

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[12] Iraq, Russia, the United States, Iran, China, Israel, Turkey, India, Syria, Thailand, North Korea, and Kuwait.

[13] These estimates are also based on a complex definition of national power described in Hughes (2004, p. 90).

[14] The model's base year estimate of the probability of war between China and the US is very low based on the historical record. The probability rises sharply in proportionate terms based on the power transition but it still remains at very low levels. In an extended simulation of the globalization scenario to 2100, China's power surpasses US power in 2074, and the dyadic probability of war between China and the US peaks at 0.2% in 2078 before starting a gradual decline.

[15] In contrast to about 4 dyadic interstate wars a year, 1946-2007. See Marshall and Goldstone (2007a, 2007b).

model predicts four great power wars in the deglobalization scenario vs. 2 in the globalization scenario.[16]

Table 6

Estimated Probability of at least One Interstate War

percent

	Globalization Scenario		Deglobalization Scenario
	2005	2035	2035
Average of 183 Countries	0.8	0.6	3.7
Average of 20 most war-prone countries	5.2	3.9	7.1
of which:			
Russia	11.1	8.1	11.4
United States	10.8	8.4	11.7
Iran	7.7	5.4	8.6
China	5.9	5.6	9.6
Israel	5.8	4.1	7.1
Turkey	5.5	4.0	7.1
India	4.4	4.1	7.8

Source: Estimates with the International Futures Model, Version 6.03

IV.   Winners and Losers

Deglobalization in the form of reduced trade interdependence, reduced capital flows, and reduced migration has few positive effects, based on this analysis with the International Futures Model.   Economic growth is cut in all but a handful of countries, and is cut more in the non-OECD countries than in the OECD countries. Deglobalization has a mixed impact on equality. In many non-OECD countries, the cut in imports from the rest of the world increases the share of manufacturing and in 61 countries raises the share of income going to the poor. But since average productivity goes down in almost all countries, this gain in equality comes at the expense of reduced incomes and increased poverty in almost all countries. The only winners are a small number of countries that were small and poor and not well integrated in the global economy to begin with—and the gains from deglobalization even for them are very small.

Politically, deglobalization makes for less stable domestic politics and a greater likelihood of war. The likelihood of state failure through internal war, projected to diminish through 2035 with increasing globalization, rises in the deglobalization scenario particularly among the non-OECD democracies.

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[16] The great powers are defined as the United States, China, India, Russia, the EU, and Japan. Wars are generated randomly in simulations based on the probabilities. The model was simulated multiple times in each scenario to calculate the average number of great power wars. The US and China did not fight each other in these scenarios, but Russia fought with most of the other great powers.

Similarly, deglobalization makes for more fractious relations among states and the probability for interstate war rises.

These are dramatic results and have strong implications for policy. For the United States and other OECD countries, deglobalization might economically benefit a small fraction of citizens and companies, but it would cut overall economic growth and reduce average living standards. It would seem far better to deal with the negative aspects of globalization directly by improving trade adjustment assistance, providing more secure access to health care, by upgrading the skills of the workforce, and by refocusing academic research toward areas that will spur productivity growth.

For the non-OECD countries, deglobalization has even worse results, suggesting that those countries need to reengage in global trade negotiations and seek compromises that can benefit all participants.

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