GLOBAL DEVELOPMENT AND ENVIRONMENT INSTITUTE

WORKING PAPER NO. 11-01

Investment Treaty Arbitration and Developing Countries: A Re-Appraisal

Kevin P. Gallagher and Elen Shrestha

May 2011

Tufts University
Medford MA 02155, USA
http://ase.tufts.edu/gdae

Abstract

There is an ongoing debate about bilateral investment treaties (BITs) – and investor-state arbitration, in particular – between those who maintain that BITs encourage investment in developing countries by providing enforceable rights and protections for investors, and those who suspect that these new rights and protections have a chilling effect on regulation for public and environmental welfare and actually hinder development. For years, both "camps" have drawn heavily upon anecdotal evidence and observations to support their view, as no systematic, comprehensive study of empirical data on investment arbitrations had been undertaken. To fill this void, legal scholar Susan Franck has evaluated the criticisms of investment arbitration based on empirical studies of published or known disputes (Franck 2009; Franck 2007). These efforts produced helpful data and initiated a productive discussion of these issues. However, the results and conclusions that can be drawn from Franck's work are more limited and warrant more nuance than Franck and others so far have taken into account. Franck's work is now widely used to support the notion that developing countries do not disproportionately "lose" under the investment arbitration regime. Such a conclusion does not appear to be supported by Franck's data. This article analyzes Franck's work to show where differing conclusions emerge. We show that: 1) there is a lack of adequate sample composition and size to conduct rigorous empirical work from which an analyst could draw such bold lessons; 2) discounting the fact that developing countries are subject to a disproportionate number of claims is not to be overlooked, especially when looking at claims by the United States; and 3) relative to government budgets and in per capita terms developing countries pay significantly more in damages than developed nations do.

Investment Arbitration and Developing Countries: A Re-Appraisal

Kevin P. Gallagher and Elen Shrestha

Introduction

There is contention among governments, the private sector, civil society organizations, and across academia regarding the extent to which bi-lateral investment treaties (BITS) and free trade agreements (FTAs) with BIT-like investment chapters unfairly subject developing countries to investment arbitration. A key argument is that these treaties elevate the rights of foreign firms over host governments, and allow those firms to directly file claims against those governments. Many claims have been targeted toward policies for the public welfare, so the story goes, and thus hinder the ability of developing countries especially to develop the proper institutions to raise their standards of living. Moreover, the costs of awards that need to be paid to claimants and the cost to carry out a case are seen as enormous by developing country standards. Taken as a whole then, these concerns make developing nations very cautious about any measure that could be perceived as in violation of a treaty.

A growing number of actors argue that such fears can be laid to rest. Defenders claim that the system does not unfairly subject developing countries to arbitral panels. When these arguments are made, they often rely on the relatively recent empirical work by legal scholar Susan Franck (Franck 2009; Franck 2007). Franck's work suggests that developing countries are not subject to more claims under the system, and that investors do not win the majority of cases. When foreign investors do win, the awards paid are not necessarily large amounts.

More specifically, Franck[1] empirically analyzes investment treaty arbitration awards publicly available before June 1, 2006 to better understand trends in investment treaty arbitrations including main players (investors and respondent governments), arbitration outcomes (win-loss rates and amounts awarded v. amounts claimed), costs of arbitration and nationality and gender of arbitrators. The data are collected from three sources: public websites (namely Investment Treaty Arbitration, Investment Treaty Claims and ICSID), a fee-based online database (Westlaw Appleton-ISR) and print media sources. The countries are categorized two ways, using OECD's binary categorization (OECD v. non-OECD) and World Bank's categorization (high income countries, upper middle income countries, lower middle income countries and low income countries).

Franck also analyses the costliness of supporting and defending a claim, and looks at the role of nationality in dispute outcomes[2].

Franck's study found that the bulk of the cases (around 90%) did indeed originate from high income countries of which 32 cases were from the U.S. Among the respondent governments, 70% were non-OECD (or developing) countries. However, only few came from low-income countries and high proportion of arbitration (45%) were subjected against upper middle income developing countries. In terms of arbitration outcomes, the ultimate winners did not appear to be significantly different for investors and respondent countries. Investors on average won less than half of the cases and even when they won, they did not win big. U.S. seemed to follow the similar trend and lose more. The study found a statistically significant difference between amounts claimed and awarded. Thus Franck concluded that although there are rooms for improvement, investment arbitration was functioning in an unbiased manner.

In 2009, using 2007 arbitration award data, Franck[3] conducted econometric analysis to study the relationship among development status of the respondent government, development status of the presiding arbitrator and arbitration outcome (both in terms of win -loss and amounts awarded). Franck found no significant relationship between development status of the respondent country, development status of the presiding arbitrator and outcome of the arbitration.

The Limits of Franck's Analysis

This working paper critically analyzes parts of Franck's work and concludes that such work may be limited in explaining the development impacts of investor-state dispute resolution. In the order they will appear in this working paper, our main concerns are:

- There is a lack of adequate sample composition and size to conduct rigorous empirical work from which an analyst could draw such bold lessons.
- Discounting the fact that developing countries are subject to a disproportionate number of claims is not to be overlooked, especially when looking at claims by the United States.
- Relative to government budgets and in per capita terms developing countries pay significantly more in damages than developed nations do.

We therefore recommend caution when relying on Franck's work to argue that investor-state arbitration is neutral toward developing countries.

To complete this working paper we examine the UNCTAD Database of Treaty-Based Investor-State Dispute Settlement Cases[4] and the cases included are those that were publicly available as of February 28, 2010. The information was verified using other websites including Investment Treaty Arbitration website[5], International Center for Settlement of Investment Disputes (ICSID) website[6] and Westlaw-Appleton-all database. The information on specifics of the arbitrations was collected such as status of the case (pending v. settled v. concluded), amounts claimed[7] and amounts awarded[8]. The countries were then classified using World Bank's category of High Income Countries, Upper Middle Income Countries, Lower Middle Income Countries and Low Income Countries.

We look at each of these concerns below, and will frequently refer to Table 1 here:

TABLE 1: SUMMARY OF U.S. "WINS AND LOSSES" AND RELATIVE IMPACT OF U.S. WINS TO HOST COUNTRIES' ECONOMY

	Total # of arbitrations		US wins		US losses	Average Award	Award Amt/ Govt Exp	Award Amt per capita
Country with BIT/ FTA	US as investor	US as respondent	As investor	As respondent	As investor	US as investor	US as investor	US as investor
Argentina	17	0	5	0	1	$107,138,243	0.386%	$2.73
Armenia	1	0	0	0	0	$0	0.000%	$0.00
Bangladesh	1	0	0	0	0	$0	0.000%	$0.00
Canada*	13	12	1	6	2	$3,858,911	0.003%	$0.12
Congo, Dem. Rep.	4	0	1	0	2	$9,000,000	1.894%	$0.19
Czech Republic*	1	0	0	0	1	$0	0.000%	$0.00
Dominican Republic	1	0	0	0	0	$0	0.000%	$0.00
Ecuador	10	0	2	0	1	$38,556,108	1.006%	$2.98
Egypt	2	0	0	0	1	$0	0.000%	$0.00
El Salvador	1	0	0	0	0	$0	0.000%	$0.00
Estonia*	2	0	0	0	1	$0	0.000%	$0.00
Georgia	2	0	0	0	0	$0	0.000%	$0.00
Guatemala	1	0	0	0	0	$0	0.000%	$0.00
Jordan	2	0	0	0	0	$0	0.000%	$0.00
Kazakhstan	4	0	2	0	1	$9,425,855	0.372%	$0.63
Kyrgyzstan	1	0	0	0	0	$0	0.000%	$0.00
Mexico	14	0	3	0	6	$17,040,968	0.020%	$0.17
Moldova	1	0	0	0	1	$0	0.000%	$0.00
Panama	1	0	0	0	0	$0	0.000%	$0.00
Poland	2	0	0	0	0	$0	0.000%	$0.00
Romania	3	0	0	0	2	$0	0.000%	$0.00
Sri Lanka	1	0	0	0	1	$0	0.000%	$0.00
Trinidad And Tobago*	1	0	0	0	1	$0	0.000%	$0.00
Turkey	2	0	1	0	0	$9,061,479	0.011%	$0.12
Ukraine	5	0	0	0	1	$0	0.000%	$0.00
	93	**12**	**15**	**6**	**22**		**0.53%**	**$0.99**

Note: * indicates high income countries.
Sources: http://tcc.export.gov/Trade_Agreements/Bilateral_Investment_Treaties/index.asp; http://tcc.export.gov/Trade_Agreements/Free_Trade_Agreements/index.asp; http://www.unctad.org/iia-dbcases/cases.aspx?col_aa=show; http://ita.law.uvic.ca/chronological_list.htm; http://icsid.worldbank.org/ICSID/FrontServlet; Westlaw- Appleton-All database; World Development Indicators(The World Bank Group)

I. Lack of adequate sample composition and size.

A truly testable dataset that could form the basis of rigorous empirical work does not exist. Focusing solely on arbitration awards to ascertain the effect of investment arbitration leaves out (1) cases where a treaty is used to "chill" or threaten a nation from deploying a particular measure, (2) the many possible cases that are unknown and unreported, and (3) the many likely settlements – under threat of arbitration – the payment amounts and details of which we will never know. Therefore, analysts and policy-makers should take the empirical analysis in these studies with more than a grain of salt because there is an extremely limited set of data to work with. The available data only consists of known cases taken to arbitration and does not include the countless times that investors use the threat of arbitration to change policy in developing countries. Second, when even taking the available data at face value, the sample size is extremely limited in its ability to yield rigorous results.

It is commonly held that threats of claims against government occur much more frequently than actual cases. A truly representative empirical analysis of the impact of investment arbitration on developing countries would include such data. Of course such data does not exist. An illustrative list of some cases is exhibited in Box 1.

As Luke Eric Peterson, publisher of the *Investment Law Reporter* said in an interview for this working paper:

> "There is no obvious way to measure how often investment treaties are used in *informal* contexts by foreign investors in the context of negotiation or lobbying. However, in my experience as a journalist tracking this area, I would not be the least bit surprised if there were dozens upon dozens of such *informal* treaty-uses for every claim that actually gets arbitrated. Virtually every lawyer I know professes to use these treaties in negotiations on behalf of their clients with governments. As a reporter it's frustrating to know that the primary use of these treaties is in such non-arbitration contexts, but to lack fuller details of such uses - including the legal, policy and financial impacts."

Even taking Franck's work at face value, the sample size does not lend itself to fully rigorous work, and Franck admits that much (Franck 2009).The sample size for Franck's study consists of 102 awards from 82 cases out of which 52 are final awards that resolved case's treaty claims. Due to problem of missing data, sample size was lessened to 47 when testing the relationship between development status of the country and arbitration outcome. Moreover, the sample size was 49 when testing the effect on awarded amount. Franck herself admits that small sample size could lead to statistical results which may be spurious. Franck conducted effect size analysis in addition to hypothesis testing. She found that the effect size were "small" to "moderate" in the analysis of World Bank status of the respondent country, presiding arbitrator and the result of the arbitration.

Thus, she admitted that the result might be underpowered and a larger sample size may be needed to eliminate the power problem. Similarly, she found that the main effect of

Box 1:
Ban on the gasoline additive MMT in Canada:
This case concerns a ban on the gasoline additive MMT in Canada. The Government of Canada was involved in arbitration with Ethyl Corp. It is speculated that among various factors, risk of losing NAFTA Chapter 11 arbitration may have been one of the reasons for the Government to settle with Ethyl Corp. The company was compensated and the Government lifted the ban.

Public auto insurance in Canada:
This case involves plans by provincial government of Canada to introduce public auto insurance options. Such plan led to threats by insurance industry to sue the Government under NAFTA Chapter 11. The Government retracted and it is believed that threat of arbitration may have been key to Government's decision.

Changes to cigarette packaging and labelling in Canada:
In this case, the federal government of Canada proposed changes to packaging and labeling of cigarettes. The tobacco companies responded by threatening to start arbitration under NAFTA Chapter 11, first in 1994 and then in 2004. The Government did not move ahead with the plans and arbitration threats may have been a possible factor for such outcome.

Open-Pit Mining in Indonesia's Protected Forests:
This case concerns a law banning open-pit mining in Indonesia's protected forests. Several mining companies holding contracts in areas of protected forest threatened to take the government to arbitration (claims in the range of 20-30 billion USD) if the ban was applied to their prospective mining operations. Eventually a number of foreign investors were exempted from such a ban. Given the timing of government's action and responses to media, it is highly likely that the government wanted to eliminate arbitration threat.

Offshore Oil Exploration in Costa Rica:
The case concerns a U.S. oil company; Texas based Harken Energy, that held several land and offshore concessions in the country. The oil company's land concessions were annulled and it encountered problems in the approval of its Environmental Impact Assessment (EIA) for the offshore concessions. This issue led to a conflict with the government and a filing to initiate investment arbitration under the terms of a state contract. The threat of arbitration was viewed as a company's attempt to bluff to strengthen its negotiating power. The company eventually withdrew its arbitration request and started negotiations with the government. At one point, the government was willing to pay up to USD 11 million to eliminate arbitration threat. In 2005, the government finally cancelled the concession contract with no terms of negotiations made public.

Open-Pit Mining in Costa Rica:
This case involves a Canadian company, Vannessa Ventures, that held a mineral exploration license in the country. In 2002, the Costa Rican government placed a moratorium on oil and gas exploration and open-pit mining. The Canadian mining company's concession was not directly affected by the moratorium, but the company faced difficulty in the approval of its EIA. The company threatened to take the government to arbitration under the terms of the Canada-Costa Rica BIT, but was eventually in 2005 permitted to proceed with mine development. There is continued pressure on the government to annul the concessions but the government considers such a move to be highly costly in the face of repercussions.
Source: (Tienhaara)

the OECD status of presiding arbitrator was .14 implying that a sample size of 49 may not be big enough to definitely determine whether OECD status of the presiding arbitrator matters. Similar effect size was found in the analysis of the main effect and interaction of the status of the respondent state on awarded amount. Thus Franck recommended use of larger data pool base to confirm the findings of her study.

When the sample size is small, degrees of freedom get penalized. With lower degrees of freedom, standard errors may be inflated resulting in lower t-statistic. This will make it harder to reject the null hypothesis and lead to results that are not significant statistically. Similarly, *Gus Van Harten,* questions the internal validity of the relationship between development status and outcome resulting from lack of data (Harten).

II. Developing countries are subject to more claims.

It is clear from the data that developing countries are subject to more claims than are developed countries. What is more, the argument that the least developing countries are not subject to many claims does not highlight the fact that least developed countries are subject to significantly more claims than their share of global foreign investment or of their share of global BITS. Finally, the US is a special case that warrants individual attention—the US has treaties almost exclusively with non-OECD countries and is the most active in taking developing nations to arbitration.

It is important to be clear that the available data suggest that there have been 82 claims in the period studied and 57 of them have been against a developing country. Put another way, 70 percent of all claims are made toward non-OECD developing countries. By ignoring the in-group heterogeneity among OECD countries, Franck underestimates number of cases brought against developing countries (Harten). What Franck finds more comforting is that 46 percent of all claims are toward "upper middle income" developing countries as classified by the World Bank, 29 percent toward "lower middle income," and 5 percent toward low income nations.

It should be noted that such claims are in much larger proportion to the respective developing country share of foreign investment flows. "Upper middle income" developing nations only receive 10 percent of global FDI, but are subject to 46 percent of the claims. "Lower middle income" developing countries only receive 9 percent of global FDI inflows, but are subject to 29 percent of all claims. The "low income" developing nations receive less than one percent of FDI flows but are subject to five percent of the total claims.

The limited available data indicate that the United States is a special case. Of all cases, U.S. investors were claimants in nearly half of them (32 cases). The U.S. has signed bilateral investment treaties and free trade agreement with 53 countries[9]. The majority (45 out of 53) of the US treaties are with non-OECD countries and 80% of the

U.S. investment treaties are with the developing countries as classified by the World Bank. Therefore the structure of U.S. treaty composition pre-determines that developing countries will be subjected to investor-state arbitration more than the U.S. given that most developing nations (at least those that have treaties with the U.S.) are net capital importers with very little investment in the U.S. Thus, any case under a U.S. treaty that is not with the eleven high income countries will be against a developing country.

Since 1993, the investors from the US have been involved in 105[10] arbitrations related to investments. Looking at the arbitrations in which the U.S. has been involved, it was represented as the investor country in 93[11] cases. All the cases in which the U.S. was the respondent were brought by Canadian investors. No investor from a developing country so far has subjected the U.S. to a BIT arbitration. Among the twenty-five arbitrations brought by U.S. investors, half were against developing countries and 36% against "high income" countries as classified by the world bank (Canada, Czech Republic, Estonia and Trinidad and Tobago). Thus the claim that developed countries subject developing countries to more arbitration seems valid in the U.S case. However, this should not lead one to conclude that U.S. unfairly targets developing countries. The fact that the U.S. has more investment treaties with the developing countries is precisely the reason why U.S. has more arbitration with developing countries. To be able to correctly infer how the U.S. would have behaved with developed countries vis-à-vis developing countries, U.S. needs to have comparable number of investment treaties with both the developing and developed countries.

In terms of wins and losses, U.S. has never lost a case as the respondent country. U.S. investors have won 15 cases, lost 22 cases and settled 14 cases. In terms of performance with respect to developing countries, U.S. investors have won 14 cases and lost 17. Franck's work would says that this win-loss record is good news for developing countries—because they win more than they lose. However, such a judgment misses the broader picture. As noted, the threat of investment arbitrations alone has a chilling effect on developing countries' regulatory prerogatives, and this win-loss statistic does not account for every time a developing country acquiesces on a demand for fear of a lawsuit or settles an unpublicized claim (Tienhaara 2010). Moreover, to suggest that a better-than-50/50 win ration means developing countries are faring well under BITs ignores the profound economic risk facing developing countries based on this statistic; a 50% chance of catastrophic economic loss would factor into most risk-assessments as a bad bet, and would caution against signing onto BITs.

In conclusion on this point, developing countries are not only subject to the most claims but they are subject to many more claims than their proportion of global investment. The US is even more significant. Indeed, we estimate that U.S. investors are increasingly subjecting developing countries to arbitration. To estimate that, we can use the number of arbitrations the country has initiated as a proxy. *Franck's* Table 1, lists the number of cases by investor nationality, and shows that the U.S. has the highest number of investors bringing cases (Franck 2007). The number of cases brought by U.S. investors is more than five times the number of cases brought by nationals of other countries, and runners-up are in distant second place (Italian and Canadian investors). This statistic suggests that a developing country faces a much higher probability of facing investment claims from U.S. investors than nationals of other high income countries.

III. Claims and Awards toward developing countries are financially more significant.

The opportunity costs of losing a claim are much higher for developing rather than developed nations. To illustrate this point we take the example of the US. Of the total U.S. wins, the average award amount has been around \$47 million (\$50 million excluding Canada[12]). The average award Canada is liable to pay to the U.S. for losing arbitration is \$3.9 million which is the lowest amount (See Table 1). Other countries face much higher penalty ranging from \$9 million (Kazakhstan, Turkey and Congo Democratic Republic) to \$107 million (Argentina). For the cases where U.S. has won, the average amount claimed is much higher and is around \$234 million[13] (\$251 million excluding Canada). Thus compared to Canada (which can be used as a proxy for developed country), the developing countries seem to be subjected to higher amount both in terms of claims and awards. The disparity becomes clearer when we compare the average amount claimed by U.S. investors against high income countries v. developing world. For all the arbitrations U.S. investors have had brought against high income countries, the average claim amount has been around \$150 million. That amount is much less than the average amount that U.S. investors have claimed against the developing countries (\$451 million).

To get a more complete picture of how losses affect developing countries, we analyze the amount the developing countries are liable for relative to their economy. Table 1 shows that average award against developing countries relative to their annual government expenditure is 0.53% or 99 cents per capita. The average award amount Canada is liable for is 0.003% of its annual government spending and translates to 12 cents per capita. Thus compared to a developed country, the award amounts have a higher impact on the economy of developing countries.

Looking at the wins of U.S. investors on a case by case basis, there are five awards (four against Argentina and one against Ecuador) that range from \$2.7- \$5.5 per capita. The per capita range for claims are much higher \$5.6 - \$18.4. These awards relative to government expenditure range from 0.31% - 1.92% (0.69% - 7.51% in terms of claims per government expenditure).

With arbitration on the rise, it is a valid concern that a respondent country might be liable for numerous awards. This was the case in 2007, when the U.S. won two[14] cases against Argentina. The total award amount summed to $235 million which translates to 0.7% of annual government expenditure or $6 per capita in Argentina.

For example in 2004, a U.S. investor won an arbitration against Ecuador[15] an claiming an amount of damages that translated to $5.5 and $16 per capita respectively. The claimed damages per capita was equivalent to Ecuadorian aid per capita. Thus, had the U.S. investor been successful in getting the claimed amount, Ecuador payments would have been analogous to transferring aid per capita to the U.S. The award and claim amount relative to government expenditure were 1.92% and 7.5%. The importance of these numbers become clear in the light that Ecuador spends annually around 7% of their government expenditure on health.

In conclusion, the U.S. is an outlier in the investment treaty arbitration world. It signs treaties predominantly with the developing countries, and its nationals are much more active in subjecting developing countries to international arbitration. While US investors have lost more cases than they have won, the US government has never lost a case as a respondent.

Kevin P. Gallagher is associate professor of international relations at Boston University and Senior Researcher at the Global Development and Environment Institute, Tufts University. Elen Shrestha is research associate at the Global Development and Environment Institute, Tufts University. Inquiries can be directed to Kevin.Gallagher@tufts.edu

References:

Franck, S. D. (2009). "Development and Outcomes of Investment Treaty Arbitration." Harvard International Law Journal 50: 435-489.

Franck, S. D. (2007). "Empirically Evaluating Claims About Investment Treaty Arbitration." North Carolina Law Review 86.

Harten, G. V. (2011). The Use of Quantitative Methods to Examine Possible Bias in Investment Arbitration. The Yearbook of International Investment Law & Policy 2010/ 2011. K. Sauvant ed.

International Center for Settlement of Investment Disputes (ICSID). Retrieved 3/12/2010, from http://icsid.worldbank.org/ICSID/FrontServlet.

Investment Treaty Arbitration. Retrieved 2/28/2010, from http://ita.law.uvic.ca/chronological_list.htm.

Office of the United States Trade Representative. "Free Trade Agreements." Retrieved 1/27/2010, from http://www.ustr.gov/trade-agreements/free-trade-agreements.

The World Bank Group. "World Development Indicator." from http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=6.

Tienhaara, K. (2010). "Regulatory chill and the threat of arbitration: a view from political science."

Trade Compliance Center - Free Trade Agreement. Retrieved 1/27/2010, from http://tcc.export.gov/Trade_Agreements/Free_Trade_Agreements/index.asp.

Trade Compliance Center - U.S. Bilateral Investment Treaty. Retrieved 1/27/2010, from http://tcc.export.gov/Trade_Agreements/Bilateral_Investment_Treaties/index.asp.

UNCTAD Database of Treaty-Based Investor-State Dispute Settlement Cases. (2010). Retrieved 2/28/2010, from http://www.unctad.org/iia-dbcases/cases.aspx?col_aa=show.

Notes

[1] Franck, S. D. (2007). "Empirically Evaluating Claims About Investment Treaty Arbitration." North Carolina Law Review **86**.
[2] To these authors, this aspect of Franck's analysis appears to be fairly arbitrary. The nationality of an arbitrator and the extent to which such arbitrators "side" with their respective nationality has never been part of the debate on investor-state arbitration and development and thus we do not focus on this analysis.
[3] Franck, S. D. (2009). "Development and Outcomes of Investment Treaty Arbitration." Harvard International Law Journal **50**: 435-489.
[4]UNCTAD Database of Treaty-Based Investor-State Dispute Settlement Cases. (2010). Retrieved 2/28/2010, from http://www.unctad.org/iia-dbcases/cases.aspx?col_aa=show.
[5] Investment Treaty Arbitration. Retrieved 2/28/2010, from http://ita.law.uvic.ca/chronological_list.htm.
[6] International Center for Settlement of Investment Disputes (ICSID). Retrieved 3/12/2010, from http://icsid.worldbank.org/ICSID/FrontServlet.
[7] Care was taken to collect and standardize the amount of claims and awards. However there are discrepancies: some claims are maximum amount, while others are minimum and some include costs while most do not. In more than half the cases, the claim awards are unknown.
[8] The award amount has not been classified into merits, damages and costs. It has been quantified at an aggregate level (excluding costs) as much as possible.
[9] Office of the United States Trade Representative. "Free Trade Agreements." Retrieved 1/27/2010, from http://www.ustr.gov/trade-agreements/free-trade-agreements, Trade Compliance Center - Free Trade Agreement. Retrieved 1/27/2010, from http://tcc.export.gov/Trade_Agreements/Free_Trade_Agreements/index.asp, Trade Compliance Center - U.S. Bilateral Investment Treaty. Retrieved 1/27/2010, from http://tcc.export.gov/Trade_Agreements/Bilateral_Investment_Treaties/index.asp.
[10] Excluding two investment-related arbitration the U.S. investors has with the Venezuela Republic. There is no BIT/ FTA between the U.S. and Venezuela.
[11] Two of the arbitrations had both the U.S. and Netherlands as the investor countries.
[12] Canada is the only high income country against which the U.S. has won.
[13] The claim values for three cases were unknown and hence are excluded.
[14] Enron Corporation and Ponderosa Assets LP v. Argentina (ICSID Case No. ARB/01/3) and Sempra Energy International v. Argentine Republic (ICSID Case No. ARB/02/16)
[15] The mentioned case is Occidental Exploration and Production Company v. Ecuador (LCIA Case No. UN3467).

The Global Development And Environment Institute (GDAE) is a research institute at Tufts University dedicated to promoting a better understanding of how societies can pursue their economic goals in an environmentally and socially sustainable manner. GDAE pursues its mission through original research, policy work, publication projects, curriculum development, conferences, and other activities. The "GDAE Working Papers" series presents substantive work-in-progress by GDAE-affiliated researchers. We welcome your comments, either by e-mail directly to the author or to G-DAE, Tufts University, 44 Teele Ave., Medford, MA 02155 USA; tel: 617-627-3530; fax: 617-627-2409; e-mail: gdae@tufts.edu; website: http://ase.tufts.edu/gdae.

Papers in this Series:

00-01 Still Dead After All These Years: Interpreting the Failure of General Equilibrium Theory (Frank Ackerman, November 1999)
00-02 Economics in Context: The Need for a New Textbook (Neva R. Goodwin, Oleg I. Ananyin, Frank Ackerman and Thomas E. Weisskopf, February 1997)
00-03 Trade Liberalization and Pollution Intensive Industries in Developing Countries: A Partial Equilibrium Approach (Kevin Gallagher and Frank Ackerman, January 2000)
00-04 Basic Principles of Sustainable Development (Jonathan M. Harris, June 2000)
00-05 Getting the Prices Wrong: The Limits of Market-Based Environmental Policy (Frank Ackerman and Kevin Gallagher, September 2000)
00-06 Telling Other Stories: Heterodox Critiques of Neoclassical Micro Principles Texts (Steve Cohn, August 2000)
00-07 Trade Liberalization and Industrial Pollution in Mexico: Lessons for the FTAA (Kevin Gallagher, October 2000) *(Paper withdrawn- see www.ase.tufts.edu/gdae/ for details)*
00-08 Waste in the Inner City: Asset or Assault? (Frank Ackerman and Sumreen Mirza, June 2000)
01-01 Civil Economy and Civilized Economics: Essentials for Sustainable Development (Neva Goodwin, January 2001)
01-02 Mixed Signals: Market Incentives, Recycling and the Price Spike of 1995. (Frank Ackerman and Kevin Gallagher, January 2001)
01-03 Community Control in a Global Economy: Lessons from Mexico's Economic Integration Process (Tim Wise and Eliza Waters, February 2001)
01-04 Agriculture in a Global Perspective (Jonathan M. Harris, March 2001)
01-05 Better Principles: New Approaches to Teaching Introductory Economics (Neva R. Goodwin and Jonathan M. Harris, March 2001)
01-06 The $6.1 Million Question (Frank Ackerman and Lisa Heinzerling, April 2002)
01-07 Dirt is in the Eye of the Beholder: The World Bank Air Pollution Intensities for Mexico (Francisco Aguayo, Kevin P. Gallagher, and Ana Citlalic González, July 2001)
01-08 Is NACEC a Model Trade and Environment Institution? Lessons from Mexican Industry (Kevin P. Gallagher, October 2001)
01-09 Macroeconomic Policy and Sustainability (Jonathan M. Harris, July 2001)

02-01 Economic Analysis in Environmental Reviews of Trade Agreements: Assessing the North American Experience. (Kevin Gallagher, Frank Ackerman, Luke Ney, April 2002)
03-01 Read My Lips: More New Tax Cuts—The Distributional Impacts of Repealing Dividend Taxation (Brian Roach, February 2003)
03-02 Macroeconomics for the 21st Century (Neva R. Goodwin, February 2003)
03-03 Reconciling Growth and the Environment (Jonathan M. Harris and Neva R. Goodwin, March 2003)
03-04 Current Economic Conditions in Myanmar and Options for Sustainable Growth (David Dapice, May 2003)
03-05 Economic Reform, Energy, and Development: The Case of Mexican Manufacturing (Francisco Aguayo and Kevin P. Gallagher, July 2003)
03-06 Free Trade, Corn, and the Environment: Environmental Impacts of US-Mexico Corn Trade Under NAFTA
03-07 Five Kinds of Capital: Useful Concepts for Sustainable Development (Neva R. Goodwin, September 2003)
03-08 International Trade and Air Pollution: The Economic Costs of Air Emissions from Waterborne Commerce Vessels in the United States (Kevin P. Gallagher and Robin Taylor, September 2003)
03-09 Costs of Preventable Childhood Illness: The Price We Pay for Pollution (Rachel Massey and Frank Ackerman, September 2003)
03-10 Progressive and Regressive Taxation in the United States: Who's Really Paying (and Not Paying) their Fair Share? (Brian Roach, October 2003)
03-11 Clocks, Creation, and Clarity: Insights on Ethics and Economics from a Feminist Perspective (Julie A. Nelson, October 2003)
04-01 Beyond Small-Is-Beautiful: A Buddhist and Feminist Analysis of Ethics and Business (Julie A. Nelson, January 2004)
04-02 The Paradox of Agricultural Subsidies: Measurement Issues, Agricultural Dumping, and Policy Reform (Timothy A. Wise, February 2004)
04-03 Is Economics a Natural Science? (Julie Nelson, March 2004)
05-01 The Shrinking Gains from Trade: A Critical Assessment of Doha Round Projections (Frank Ackerman, October 2005)
05-02 Understanding the Farm Problem: Six Common Errors in Presenting Farm Statistics (Timothy A. Wise, March 2005)
05-03 Securing Social Security: Sensitivity to Economic Assumptions and Analysis of Policy Options (Brian Roach and Frank Ackerman, May 2005)
05-04 Rationality and Humanity: A View from Feminist Economics (Julie A. Nelson, May 2005)
05-05 Teaching Ecological and Feminist Economics in the Principles Course (Julie A. Nelson and Neva Goodwin, June 2005)
05-06 Policy Space for Development in the WTO and Beyond: The Case of Intellectual Property Rights (Ken Shadlen, November 2005)
05-07 Identifying the Real Winners from U.S. Agricultural Policies (Timothy A. Wise, December 2005)
06-01 The Missing Links between Foreign Investment and Development: Lessons from Costa Rica and Mexico (Eva A. Paus and Kevin P. Gallagher, February 2006)
06-02 The Unbearable Lightness of Regulatory Costs (Frank Ackerman, February 2006)

06-03 Feeding the Factory Farm: Implicit Subsidies to the Broiler Chicken Industry (Elanor Starmer, Aimee Witteman and Timothy A. Wise, June 2006)
06-04 Ethics and International Debt: A View from Feminist Economics (Julie A. Nelson, August 2006)
06-05 Can Climate Change Save Lives? (Frank Ackerman and Elizabeth Stanton, September 2006)
06-06 European Chemical Policy and the United States: The Impacts of REACH (Frank Ackerman, Elizabeth Stanton and Rachel Massey, September 2006)
06-07 The Economics of Inaction on Climate Change: A Sensitivity Analysis (Frank Ackerman and Ian J. Finlayson, October 2006)
07-01 Policy Space for Mexican Maize: Protecting Agro-biodiversity by Promoting Rural Livelihoods (Timothy A. Wise, February 2007)
07-02 Declining Poverty in Latin America? A Critical Analysis of New Estimates by International Institutions (Ann Helwege and Melissa B.L. Birch, September 2007)
07-03 Economists, Value Judgments, and Climate Change: A View From Feminist Economics (Julie A. Nelson, October 2007)
07-04 Living High on the Hog: Factory Farms, Federal Policy, and the Structural Transformation of Swine Production (Elanor Starmer and Timothy A. Wise, December 2007)
07-05 The Politics of Patents and Drugs in Brazil and Mexico: The Industrial Bases of Health Activism (Ken Shadlen, December 2007)
08-01 An Overview of Climate Change: What does it mean for our way of life? What is the best future we can hope for? (Neva Goodwin, March 2008)
08-02 Ecological Macroeconomics: Consumption, Investment, and Climate Change (Jonathan Harris, July 2008)
08-03 Policies for Funding a Response to Climate Change (Brian Roach, July 2008)
09-01 Resources, Rules and International Political Economy: The Politics of Development in the WTO (Kenneth C. Shadlen, January 2009)
09-02 Reforming and Reinforcing the Revolution: The Post-TRIPS Politics of Patents in Latin America (Kenneth C. Shadlen, April 2009)
09-03 Economic Writing on the Pressing Problems of the Day: The Roles of Moral Intuition and Methodological Confusion (Julie A. Nelson, April 2009)
09-04 Sociology, Economics, and Gender: Can Knowledge of the Past Contribute to a Better Future? (Julie A. Nelson, August 2008)
09-05 The Environmental Impacts of Soybean Expansion and Infrastructure Development in Brazil's Amazon Basin (Maria del Carmen Vera-Diaz, Robert K. Kaufmann, and Daniel C. Nepstad, May 2009)
09-06 Between a Rock and a Soft Place: Ecological and Feminist Economics in Policy Debates (Julie A. Nelson, June 2009)
09-07 Getting Past "Rational Man/Emotional Woman": How Far Have Research Programs in Happiness and Interpersonal Relations Progressed? (Julie A. Nelson, June 2009)
09-08 Agricultural Dumping Under NAFTA: Estimating the Costs of U.S. Agricultural Policies to Mexican Producers (Timothy A. Wise, December 2009)
10-01 Climate-Resilient Industrial Development Paths: Design Principles and Alternative Models (Lyuba Zarsky, February 2010).

10-02 Care Ethics and Markets: A View from Feminist Economics (Julie A. Nelson, May 2010)

10-03 The Relational Economy: A Buddhist and Feminist Analysis (Julie A. Nelson, May 2010)

10-04 Buyer Power in U.S. Hog Markets: A Critical Review of the Literature (Timothy A. Wise and Sarah E. Trist, August 2010)

10-05 The Macroeconomics of Development without Throughput Growth (Jonathan Harris, September 2010)

10-06 Does Profit-Seeking Rule Out Love? Evidence (or Not) from Economics and Law (Julie A. Nelson, September 2010)

11-01 Investment Treaty Arbitration and Developing Countries: A Re-Appraisal (Kevin P. Gallagher and Elen Shrestha, May 2011)