

The Reductionist Gamble: Open Economy Politics in a Global Economy

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Abstract

An unknown but potentially substantial share of the knowledge generated by open economy politics (OEP) scholarship is inaccurate. OEP employs a reductionist methodology to study the domestic political determinants of foreign economic policies in isolation from international political processes. Although some policy choices are purely the product of domestic politics, others result from the interaction between domestic and international processes. In these cases, ignoring the relevant international process causes the researcher to draw biased inferences about the domestic political relationships under investigation. OEP is thus engaged in what I call a reductionist gamble: the embrace of a reductionist method without due consideration to the downside risk (what are the consequences if reductionism is inappropriate?) and without calculating the odds (what is the likelihood that reductionism is appropriate in any given instance and in general?). Consequently, OEP scholarship generates biased empirical knowledge at some unknown frequency.

There is more than a little irony in the recognition that as national economies have grown ever-more deeply enmeshed in cross-border networks of investment, production, and trade American international political economy scholars have focused ever-more heavily on domestic politics. Yet, it is true. Research that investigates the domestic politics of governments' foreign economic policy choices dominates contemporary American IPE scholarship. Often referred to as Open Economy Politics (OEP), this research program explores the source of societal preferences over tariffs, monetary and exchange rate policies, and investment flows.¹ It examines how characteristics of domestic political institutions, such as regime type, electoral and party systems, veto players, and central bank independence, aggregate and transform preferences into policy outcomes. Most work within this research program ignores international politics, that is, interaction between governments in the global political economy. Indeed, as one senior scholar has noted, the focus on domestic politics and the relative neglect of the international dimension is so pronounced that "IPE has become increasingly difficult to distinguish from comparative political economy."²

The initial embrace of domestic politics by IPE scholars reflected a desire to place system-level or macro-oriented research on firmer micro-foundations. First-wave IPE research modeled the interaction between governments and largely ignored domestic politics. The American school of IPE emerged in the 1970s as American military power failed to produce decisive victory in Vietnam and proved irrelevant in face of the oil embargo. The initial wave of theorizing focused on system-level considerations. Keohane

¹See Cohen (2007) for a mildly critical and brief survey of the emergence and development of the American School of IPE. Maliniak and Tierney (2009) surveyed scholars to evaluate empirically Cohen's claims. See Lake (2009a, 2009b, 2006) for a more comprehensive review of OEP.

²Keohane (2009, 37-8).

and Nye developed complex interdependence; other scholars developed the hegemonic stability hypothesis to relate changes in global economic openness to the distribution of power in the system. Scholars refined and further developed this approach via regime theory and what came to be called neo-liberal institutionalism.³ This early research made rather simplifying assumptions about domestic politics. IPE scholars thus began to focus more heavily on domestic politics in order to replace these simplifying assumptions with logically sound and empirically-verified models about how domestic politics shape government preferences and behavior.⁴ Along the way, however, the study of domestic politics generated its own momentum, emerged as a distinct research program, and subsequently came to dominate research in American IPE.

OEP practitioners justify the attention they devote to domestic politics on epistemological grounds. OEP rests on the belief that generating knowledge of “enduring value” requires bringing scientific rigor to the study of international political economy.⁵ Scientific rigor involves developing coherent “theoretical arguments for which there is systematic empirical support” or generating “empirical evidence for a regularity, “law” or other relationship that holds beyond a reasonable doubt.”⁶ OEP practitioners argue that OEP’s emphasis on mid-range theories about domestic political relationships tested empirically with statistical methods is the approach most likely to generate relatively certain knowledge about important causal relationships.⁷

³On complex interdependence, see Keohane and Nye (1977). On hegemonic stability, see Kindleberger (1973), Krasner (1976) and Gilpin (1981). On regime theory and neoliberal institutionalism, see Krasner (1982) Keohane (1984).

⁴Frieden and Martin (2002, 119); Lake (2006).

⁵ (Frieden and Lake 2005, 138).

⁶ (Frieden and Lake 2005, 138)

⁷ Lake (2009b).

This paper argues that although OEP can generate relatively certain knowledge, the methodological approach upon which it rests can also lead us astray. For reasons I elaborate below, each OEP model that examines domestic political economy in isolation from international political economy runs some risk of drawing biased inferences about the causal relationships it examines. This risk arises because OEP employs a reductionist methodology to decompose the international political economy into its constituent sub-systems—private-sector preference formation, domestic politics of aggregation, international bargaining—in order to study each sub-system in isolation from the others.⁸ And although one may sometimes study sub-systems independent from one another, one shouldn't assume that one can study them in isolation. When OEP applies this reductionist method inappropriately—to instances in which policy choices are a product of the interaction between domestic and international processes—the inferences it draws about the causal relationships under investigation are inaccurate. OEP thus generates reliable knowledge only to the extent that it is appropriate to study domestic politics in isolation from international politics.

Yet, OEP scholars have paid little attention to the frequency with which or the conditions under which domestic politics can be studied in isolation from international politics. OEP scholars do not know whether the global political economy *typically* can be decomposed into independent sub-systems, and do not know whether any specific phenomenon can be studied by isolating domestic politics from international politics. Thus, OEP scholars do not know whether the models of domestic politics they have

⁸As I elaborate below, OEP relies upon a reductionist *method*; it does not seek to develop reductionist *theory* that purports to explain the behavior of the system solely with reference to the behavior of its constituent units (states). Waltz's (1979) critique of reductionism in international politics focuses on theoretical rather than methodological reductionism.

developed are biased or unbiased on average or biased or unbiased in any specific instance. In short, OEP scholars have bet on a reductionist method without thinking much about the downside risk (what are the consequences if reductionism is inappropriate?) and without calculating the odds (what is the likelihood that reductionism is appropriate to the causal mechanisms at work?). This is what I call OEP's "reductionist gamble."

This paper elaborates this reductionist gamble. Section one illustrates the extent to which OEP focuses on domestic politics and explains how this focus reflects adherence to a reductionist methodology. Section two highlights the downside risk of methodological reductionism. I conceptualize the nature of the bias we introduce when we inappropriately study domestic politics in isolation from international politics, and reanalyze a recent study of developing country tariff politics to demonstrate that this bias can be large enough to have meaningful substantive implications. The conclusion considers the frequency with which causal mechanisms are appropriate for the application of methodological reductionism and draws out the broader implications of the argument.

1. Methodological Reductionism and Open Economy Politics

Open economy politics' modal research design studies domestic politics in isolation from international politics. The extent to which OEP research prioritizes the development of such models of domestic politics is evident in two leading venues for IPE scholarship, *International Organization (IO)* and the *American Political Science Review (APSR)*. Between 1996 and 2006, *IO* and the *APSR* published 102 substantive IPE articles (see table 1), that is, articles that focused primary theoretical and empirical

attention on international trade, exchange rates and macroeconomic policy (including central banking), international finance, development, or multinational corporations.⁹

Models that study domestic politics in isolation from international politics constituted more than three-quarters of these articles.

(Table One About Here)

Fifty-six articles—more than half of all those published by *IO* and the *APSR* in the last decade—focus *exclusively* on domestic politics. These articles employ a domestic independent variable to explain a domestic dependent variable and accord no explicit theoretical role to macro-level processes. Research on trade policy, for example, refines and evaluates the factoral and sectoral models of private sector preferences derived from the Stolper-Samuelson and Ricardo-Viner models of trade.¹⁰ A smaller literature examines how partisan politics or domestic political institutions transform these private sector interests into trade policy.¹¹

Research on monetary and exchange rate policy similarly focuses exclusively on domestic politics.¹² While some work focuses on individual preferences, most explores how domestic institutions shape policy choices or outcomes.¹³ Researchers explore the

⁹Based on all IPE articles published in *IO* Volumes 50 Issue1 through Volume 60 Issue 1 and the *APSR* Volume 90 Issue 1 through Volume 100 Issue 1. I excluded two *IO* special issues (Legalization and Rational Institutional Design). To select articles I follow David Lake's (2006) definition of IPE as a "substantive topic of inquiry" rather than a bundle of models and methods. I emphasize substantive focus, excluding articles whose principle focus (dependent and independent variable) falls outside the traditional substantive areas of IPE (Trade, Money, Development, MNCs). International organizations were an international phenomenon.

¹⁰See, e.g., Alt et al. (1999); Chase (2003); Fordham and McKeown (2003); Hansen and Mitchell (2000); Hathaway (1998); Hiscox (1999, 2002; Hiscox 2001); Ladewig (2006).

¹¹Kubota and Milner (2005); Karol (2000); Fordham (1998); Epstein and O'Halloran (1996); Noland (1997); Schnietz (2003).

¹²See, for example, Bernhard and Leblang (1999, 2002; 2000); Bearce (2003); Broz (1998, 1999, 2002); Clark (2002); Clark and Hallerberg (2000); Frieden (2002); Hall and Franzese (1998); Hallerberg (2002); Iverson (1998); Keefer and Stasavage (2002, 2003); Leblang and Satyanath (2006); Simmons (1996).

¹³Scheve (2004).

choice between fixed exchange rates and central bank independence as commitment mechanisms; they explore how differences in electoral systems and legislative institutions affect the probability of maintaining a fixed exchange rate. Interaction between governments plays no central role in the theoretical models developed by these research programs, or in the empirical models used to evaluate them.¹⁴

Even that OEP literature which does employ global phenomena as central explanatory variables accords little role to international politics, that is, to interaction between governments. Research in this “second image reversed” tradition, which constitutes roughly 24 percent of published articles, explores how variation (cross national and temporal) in the depth of integration into the global economy affects government policy choices. A large literature, for example, examines how participation in the global market shapes incentives to create and reform the welfare state.¹⁵ Other scholars examine how global markets constrain governments’ ability to pursue independent macroeconomic policies, and to tax mobile capital.¹⁶ Similarly, a body of research explores how foreign capital inflows, channeled through foreign aid programs, provided conditionally by international financial organizations, and loaned through private markets shape domestic political and economic structures.¹⁷ Although second image reversed studies explicitly incorporate global forces, they typically omit interaction

¹⁴ Smaller literatures display identical characteristics. Li and Resnick (2003) and Jensen (2003), explore the relationship between domestic institutions (regime type and property rights protection) and FDI inflows. Gerring and Thacker (2004) explore the impact of neo-liberal economic policies on corruption. Kang (2002) emphasizes domestic “money politics” to explain South Korean development. MacIntyre (2001) explores how domestic political institutions shaped Asian financial crises.

¹⁵ See, e.g., Adserà and Boix (2002); Burgoon (2001); Hays, Ehrlich et al. (2005); Mares (2004); Pitruzzello (2004); Rudra (2002).

¹⁶ See, e., Clark, Reichert et al. (1998); Mosley (2000); Wibbels and Arce (2003).

¹⁷ Bird (1996); Dunning (2004); Goldsmith (2001); Kosack and Tobin (2006); Stone (2004); Verdier (1998, 2001).

between governments in order to explore how individual societies react to the environmental changes brought about by deepening participation in global markets.

The priority that OEP has accorded the development of models of domestic politics reflects adherence to methodological reductionism.¹⁸ Methodological reductionism holds that we can deepen our understanding of a complex system by breaking it into its simpler sub-units and studying these sub-units in isolation.¹⁹ The objective in employing methodological reductionism is not to develop a theory of international political economy based on the institutional attributes or behavioral characteristics of lower-level sub-units, such as states, firms, or individuals.²⁰ Instead, the objective is to develop logically coherent and empirically accurate explanations of behavior within each sub-unit which one can assemble to produce an explanation of politics in the international economy as a whole. Thus, for OEP, reductionism is not a belief about the level of analysis at which we should cast our explanations, as it is in neorealism. For OEP, reductionism is a method of inquiry.

Some OEP scholars might be surprised to be characterized as reductionist, and rather skeptical about the claim. But consider David Lake's characterization of the central logic of OEP scholarship.²¹ Lake identifies three sub-units that constitute the global political economic system: private-sector interest formation, the domestic institutions that aggregate interests and transform them into government ideal points, and international

¹⁸For a concise discussion of the many varieties of reductionism see Brigandt and Love (2008) and Polkinghorne (n.d.).

¹⁹See, e.g., Ayala (1974); Murphy (1998). See also Gaddis (2002, pp 53-70), who asserts that reductionism is the "belief that you can best understand reality by breaking it up into its various parts," and further claims that such methodological reductionism is what distinguishes social science from history.

²⁰Waltz's (1979; 1986) criticism of classical realism focused on this type of theoretical reductionism, in which realists explained aspects of international politics by reference to the attributes of states.

²¹Lake (2006; 2009a; 2009b); Frieden and Lake (2005).

bargaining. Lake notes that scholars typically examine only one sub-unit, de-emphasizing or omitting completely the others. “Few theories give equal weight to all steps in this analysis. Most focus on one step – for instance, how institutions aggregate societal interests – and treat others in “reduced form,” or as analytic simplifications that are unmodeled in the theory at hand.” Once we have developed solid understanding of the sub-units, we can assemble the parts into the larger whole. In Lake’s words, “the broadly shared assumptions [adopted by scholars studying each sub-system] allow the components to be connected together into a more complete whole.”

Lake does not call this method of enquiry “reductionist;” instead he uses the term “partial equilibrium analysis.”²² Yet, partial equilibrium analysis is a reductionist methodology. Partial equilibrium analysis decomposes a complex system (such as the global economy) into smaller sub-units (the market for an individual commodity). Its purpose in decomposing the more complex system is to simplify in order to focus narrowly on a specific causal relationship. Thus, in championing OEP’s use of partial equilibrium analysis, Lake implicitly embraces methodological reductionism.

OEP’s principal (and principled) justification for its adherence to methodological reductionism is epistemological.²³ As Lake writes, OEP based on methodological reductionism is the research strategy most likely to produce “satisfying explanations,” which he characterizes as explanations “that ‘know’ well-specified causal relationships with some degree of certainty.”²⁴ Two aspects of methodological reductionism make it eminently suitable for the generation of relatively certain knowledge. First, the mid-range theories that it develops enable scholars to focus narrowly on well-specified causal

²²Lake (2009b, 52).

²³ Lake (2009b, 52).

²⁴ Lake (2009b, 52); see also Frieden and Lake (2005).

relationships amenable to systematic empirical testing.²⁵ Second, developing well-specified causal relationships about domestic politics allows scholars to shift the basis of their empirical work from single (or at best a few) qualitative case studies to quantitative studies in which a large number of observations enables the use of statistical tests.²⁶ Statistical tests conducted upon large samples provide greater confidence that the causal relationships scholars identify are general rather than idiosyncratic. Lake concludes that the more narrowly focused theory and more systematic tests characteristic of OEP scholarship have together generated a “real cumulation of knowledge.”²⁷

2. The Downside Risk of Methodological Reductionism

Whether OEP based on methodological reductionism generates relatively certain knowledge depends entirely upon the nature of causal relationships in the world under investigation. OEP assumes that causal relationships in each sub-system that it studies are independent of processes in other sub-systems and that causality in the entire global political economy flows from the bottom to the top. As Lake writes, causality “cumulate[s] in one direction -- from interests to [domestic] institutions to international bargaining.”²⁸ At the base of the causal sequence lie “firms, sectors, or factors of production as the units of analysis” with interests over economic policy that are derived

²⁵In Lake’s (2009b, 52) words, more parsimonious theory allows for “narrower, but more easily controlled empirical tests.”

²⁶As Lake (2006, 29) notes, “Where IPE was originally constrained to case studies ... some of the best new research employs very large time series datasets and powerful econometric tools.” See Maliniak and Tierney (2009) for evidence on the growth of statistical analysis in OEP research. OEP’s focus on domestic politics probably facilitated this growth, as it has enabled cross-sectional time series to become the modal data structure. I would hypothesize that the consolidation of this approach as the OEP standard in turn reinforces the focus on domestic politics, for it is difficult to apply statistical techniques to small samples such as those one would be constrained to study if one investigated system-level processes.

²⁷Lake (2009b, 54).

²⁸Lake (2006); see also Lake (2009b); Frieden and Lake (2005). This assumption that causality in each sub-unit is independent of processes in other sub-units is also known as causal or ontological reductionism (see Murphy 1998, 1996).

“from each unit’s position within the international economy.” OEP then models how domestic political institutions aggregate and transform competing private-sector interests into a national ideal point. Finally, scholars introduce “when necessary bargaining at the international level between states with different societally-produced interests.” In short, OEP relies upon methodological reductionism because it believes that later-in-sequence processes (international interaction) do not (often) affect earlier-in-sequence processes (domestic political processes). When causal relationships in the international political economy correspond to this assumption, then reliance upon methodological reductionism is unproblematic.

When, however, later-in-sequence processes do have a causal impact on earlier-in-sequence processes, then methodological reductionism generates biased inferences about the causal relationships under investigation. When the policy choices that we study as a function of domestic politics are partly a function also of international processes, then we over-state the causal importance of domestic political factors and under-state the causal importance of international political factors. Indeed, OEP models implicitly, even if unintentionally, assign international factors zero causal significance in the foreign economic policy outcomes they model. This itself is problematic; even more worrying is the recognition that the domestic relationships uncovered by OEP research are biased, that is, inaccurate estimates. In other words, when used inappropriately, methodological reductionism produces inaccurate knowledge.

A reconsideration of a recent study of the political determinants of tariff rates in developing societies highlights the nature and potential magnitude of these biases. Changes in developing country trade policies are one of the most important changes in

the global economy during the last twenty-five years. Whereas most developing countries sheltered their economies behind high tariff barriers for the first thirty-five years that followed World War II, many engaged in dramatic trade liberalization after 1985. Of course, developing countries have not liberalized to the same extent, so we are interested in explaining variation in trade liberalization among developing country governments.

Kubota and Milner advance an explanation in which variation in trade liberalization reflects cross-national variation in domestic political institutions.²⁹ Specifically, they hypothesize that democratic regimes should have lower tariffs than autocratic regimes. They develop this hypothesis by theorizing about how domestic political institutions transform private-sector trade policy demands into tariff policy outcomes. They employ the Stolper-Samuelson theorem to suggest that low-skill workers in developing societies (the relatively abundant factor) are the principal winners from trade liberalization. They then suggest that the median voter in developing country democracies is likely to be a low-skill worker. Consequently, governments in developing country democracies, who must be responsive to the median voter, will favor relatively low tariffs. In autocracies, the relatively scarce factor (capital-intensive heavy industry, including military-related production) which loses from liberalization is more likely to control the levers of power. Hence, autocratic governments will prefer high tariffs. Kubota and Milner test this hypothesis using observations for 89 countries over the period 1980 – 1999. Their empirical analysis suggests that tariff rates are significantly lower in democracies than in autocracies.

The Kubota and Milner study is an exemplar of open economy politics. It faithfully applies Lake's three-step analytical logic: first look at private-sector

²⁹Kubota and Milner (2005).

preferences, then examine how domestic institutions aggregate these preferences, and then (if necessary) model international bargaining. Private-sector demands reflect underlying factor endowments. Domestic political institutions aggregate these demands and transform them into policy outcomes. Differences in tariff rates therefore reflect the way that different domestic institutions transform private demands into policy outcomes.

The theory provides no integrated causal role for bargaining between governments within the World Trade Organization. Instead, the WTO is absent from the theoretical model but then emerges as a control variable in the empirical model.³⁰ As such, the study assumes that methodological reductionism is an appropriate approach to the study of the political determinants of tariff rates in developing countries. Interaction between governments does not play a particularly important role, and to the extent that it does matter, we can treat it as an “analytic simplification” without introducing large errors into the analysis.

If we assume instead that the domestic politics of trade cannot be studied in isolation from the international politics of trade, what does our theoretical model look like? Prevailing macro-level theories suggest that membership and participation in the World Trade Organization should generate two macro forces that powerfully affect the tariff rates that developing country governments select. First, the WTO provides a forum in which each government can exchange domestic tariff reductions for foreign tariff reductions. As a consequence, a developing country government who might not be

³⁰The theoretical importance Kubota and Milner attach to the GATT/WTO might be seen in two facts. First, Kubota and Milner’s first textual reference to the GATT/WTO appears on the eighteenth page of the article (page 124) in their discussion of control variables. Second, Kubota and Milner’s discussion of the GATT/WTO follows and is shorter than their discussion of the International Monetary Fund. Kubota and Milner’s approach is not atypical. Mukherjee, Smith, and Li (2009) attribute no theoretical significance to the GATT/WTO in their study of the relationship between inter-sectoral factor mobility and tariff rates. Like Kubota and Milner, they merely control for WTO membership’s direct effect on tariff rates.

willing to unilaterally reduce its tariff rate on capital-intensive goods might be willing to cut this tariff in exchange for cuts in developed country agricultural protection. Second, the WTO enables governments to enforce the agreements they reach. As a consequence, while a developing country government and the US might be willing to trade tariff concessions, they may refuse to do so unless each has confidence that the other will comply with any bargain they reach. The WTO thus establishes a marketplace within which governments can exchange policy concessions and a quasi-judicial system that enables them to enforce the agreements they make. As a result, the tariff rates that governments enact as members of the WTO will not be the same as the tariff rates they would enact in the absence of the ability to enter into enforceable contracts, even if private sector interests and domestic political institutions are constant across these two worlds.

The WTO does not have an independent impact on national tariff rates. Instead, the WTO enables governments to achieve outcomes that they desire but could not achieve otherwise. One might thus suggest that the WTO process mediates the relationship between the domestic political processes that generate government policy preferences and the tariff rates that we actually observe. We can integrate these macro level theories with Kubota and Milner's model of domestic politics. They hypothesize that only some governments (those who are democracies) want to reduce tariffs. The macro-level hypothesis suggests that governments who might be willing to reduce tariffs will do so only if able to reach enforceable agreements with other governments. Combining the two produces a conditional hypothesis: the impact of regime type on tariffs is mediated by participation in the WTO. Among the subset of governments that

belong to the WTO, democracies will have lower tariffs than autocracies. Among the set of governments who do not belong to the WTO, democracies and autocracies should have similar tariff rates. In short, national tariff rates are the product of the interaction between the domestic institutions that aggregate private sector demands (micro characteristics) and international bargaining and enforcement processes that transform multiple individual government demands into tariff rates (macro characteristics).

Suppose now that this alternative theoretical model is the empirically correct model. Thus, by assumption methodological reductionism is not appropriate to the world we are modeling. This assumption allows us to explore the nature of the error we introduce by assuming that methodological reductionism is appropriate for the world we model when in fact it is not. If we translate this theoretical model into an empirical model,³¹ then the true (by assumption) empirical model is one in which the effect of regime type on tariff rates is conditional upon participation in the WTO. Thus:

$$= \beta_0 + \beta_1 R + \beta_2 W + \beta_3 R \times W + \epsilon$$

Where β_0 is the average national tariff rate, R is regime type, W is WTO, and $R \times W$ is the interaction term that captures the fact that R 's impact on tariff rates is conditional upon WTO membership. We know by assumption that $(\beta_1 + \beta_3)$ when $W=1$ (the impact of regime type on tariff rates for WTO participants) is significantly different from zero. We also know (by assumption) that β_1 (the relationship between regime type and tariffs when WTO equals zero) is not significantly different from zero.

³¹ There are other obvious complications here. Is WTO membership exogenous? Can we model strategic interaction in this simplistic fashion? I ignore these complications to focus on the more basic point.

Methodological reductionism rests on the assumption that interaction between governments does not have a causal impact on government policy choices. In the current context, this implies that we omit $R \times W$ from the model. When we omit $R \times W$ we introduce omitted variable bias into the resulting estimates. The most obvious manifestation of omitted variable bias is the zero that we assign to β_3 , a significant underestimate of its true causal importance. Second, because R and $R \times W$ are correlated with each other and with W , we will generate a β_1 that is significantly different from zero, a significant over-estimate of its true causal importance.³² Omitting causally significant interaction between governments therefore produces biased estimates of the other relationships under investigation. In this particular instance we over-estimate the independent effect of regime type on tariff rates and we under-estimate the causal impact of the WTO's mediating role. More broadly, we over-state the causal significance of domestic politics, and we under-state the causal significance of international interactions.

We can gain some appreciation for the possible magnitude of the bias by comparing two empirical models of developing country tariff rates, one that includes the interaction term and one that does not. I perform this comparison by employing the Kubota and Milner data to generate two models: their original model that does not contain an interaction term and a new model that does incorporate the WTO as a factor that mediates the relationship between regime type and tariff rates.³³ The dependent variable in the analysis is the average national statutory tariff rate. *Regime Type* is the

³² In essence, the statistical model assigns to β_1 that portion of the variation in Y that should be assigned to β_3 but cannot be so assigned because RW is omitted from the model.

³³ I downloaded the data and the stata .do file employed in the original article from Helen Milner's home page (<http://www.princeton.edu/~hmilner/Research.htm>) on February 26, 2007. The data and the procedures are thus identical to those that produced the results published in the original piece. I refer the reader to Kubota and Milner (2005) for robustness tests.

Polity score and ranges from -10 (autocracy) to +10 (democracy). *WTO Membership* is a dummy that takes the value of 1 for each year a country is a member of the GATT/WTO and the value of 0 for each country-year of non-membership. The analysis also includes a battery of control variables, for a full discussion of which I refer the reader to Kubota and Milner. Like Kubota and Milner, I estimate a fixed effects time series cross sectional model with a common ar(1) process and panel-corrected standard errors. I then included the interaction term *Regime Type X WTO Membership* and re-estimated the model. Table two reports the results.

(Table Two About Here)

Model 1 yields results identical to those Kubota and Milner reported in their original article.³⁴ Model 2, which incorporates the *Regime Type X WTO Membership* interaction term, suggests that *WTO Membership* mediates the relationship between *Regime Type* and *Tariff Rates*. When *WTO Membership* takes the value of 0, the marginal effect of *Regime Type* on tariffs is equal to the coefficient for the *Regime Type* variable.³⁵ This effect is not statistically distinct from zero. Hence, for the group of countries that do not belong to the WTO, differences in *Regime Type* do not affect *Tariff Rates*. When *WTO Membership* takes the value of 1, *Regime Type*'s effect on *Tariff Rates* is equal to the coefficient for *Regime Type* plus the coefficient for the *Regime Type X WTO Membership* interaction term. This conditional relationship is significant and large, with the estimated effect of -.5 or -.6 (depending upon specification) and a range of -.28 to -.82. The analysis thus suggests that participation in the WTO mediates the relationship between regime type and tariff rates.

³⁴ Specifically, Model 2, Table 3 on page 128.

³⁵ Brambor et al. (2006)

Is this significant interaction term really evidence that *WTO Membership* mediates the relationship between *Regime Type* and tariff rates? Might it instead be evidence that some unspecified factor that WTO members share, such as an ideological commitment to economic openness or market liberalization, mediates the relationship between *Regime Type* and participation in the global economy? One way to answer this question is to examine whether WTO membership mediates the relationship between *Regime Type* and dimensions of economic openness that fall outside the WTO's purview. If WTO membership does not mediate the relationship between *Regime Type* and other dimensions of economic openness, then we have greater confidence that the significant interaction term in Model Two tells us something meaningful about the impact of the WTO process on tariff rates.

The difficulty, of course, is that there are few measures of economic openness not affected—directly or indirectly—by WTO membership. The Sachs-Warner economic openness index might be the only candidate (Sachs and Warner 1995). The Sachs-Warner index uses five criteria to classify countries as open or closed economies: a black market premium of at least 20%, a state monopoly on exports, whether the economy is socialist, an average tariff rate above 40%, and non-tariff barrier coverage on at least 40% of imports. Countries that exhibit any one of these five criteria are classified as closed economies. Countries that do not exhibit any of the five are classified as open.

Although tariffs and non-tariff barriers constitute part of the Sachs-Warner index, it is well documented that variation in the index is driven largely by the black market premium and state monopoly on exports, (see, e.g., Rodriguez and Rodrik 2000;

Wacziarg and Welch 2008).³⁶ Neither of these criteria falls within the scope of the WTO's authority. The WTO regulates rather than forbids state trading entities, so WTO members can maintain state monopolies on exports.³⁷ The WTO has no authority over monetary and exchange rate policies, so WTO membership has no direct impact on a country's black market premium. The Sachs-Warner index therefore offers a measure of economic openness whose variation is not greatly affected by WTO bargaining processes.

I thus re-estimated Kubota and Milner's model of the Sachs-Warner index with the *Regime Type X WTO Membership* interaction term. The dependent variable is dichotomous, and thus the model is estimated as a conditional logit. The analysis yields two principal findings (see table 3). First, *Regime Type* returns a positive and highly significant coefficient. This indicates that democracies are more likely than autocracies to have open economies. Second, *Regime Type X WTO* does not return a significant coefficient. This indicates that WTO membership has no impact on the relationship between regime type and the Sachs-Warner index of economic openness. The results from Models Two and Three together thus suggest that WTO membership mediates the relationship between regime type and tariff rates but does not mediate the relationship between regime type and other government policies that affect economic openness but that fall outside WTO processes. It seems reasonable to conclude, therefore, that Model Two provides evidence of a real causal effect of WTO membership on tariff rates.

Governments who wish to liberalize trade (democracies) tend to do so within the context

³⁶An index based only on the black market premium and state export monopoly accounted for as much of the variation in dependent variables as an index constructed from all five components. Yet, an index constructed from the three other components performed substantially less well than the five-component index. Hence, black market premium and state export monopoly drive the index values. See Rodriguez and Rodrik (2000) and Wacziarg and Welch (2008).

³⁷ "The WTO does not seek to prohibit or even discourage the establishment or maintenance of state trading enterprises, but merely to ensure that they are not operated in a manner inconsistent with WTO principles and rules," (World Trade Organization (2009)).

of the WTO rather than unilaterally. Domestic politics certainly influence tariff rates, but international politics matter as well.

(Table Three About Here)

This empirical analysis suggests two broader conclusions about the consequences of OEP's reliance upon methodological reductionism. First, methodological reductionism is sometimes appropriate (as it was when applied to the relationship between regime type and the Sachs-Warner index) and sometimes inappropriate (as it was when applied to the relationship between regime type and tariff rates). Second, when we rely upon methodological reductionism to investigate causal relationships for which it is not appropriate, we draw biased inferences. Let me discuss these two conclusions in reverse order.

When we apply methodological reductionism to causal relationships that do not conform to its assumptions we draw biased inferences. The two tariff rate models produced very different inferences concerning the relationship between *Regime Type* and *Tariff Rates*. The assumption that methodological reductionism is appropriate produces the inference that democracies always have lower tariffs than autocracies. The assumption that methodological reductionism is inappropriate produces a more variegated set of inferences. On the one hand, for the set of countries that belong to the WTO, democracies have lower tariffs than autocracies. In fact, *Regime Type's* effect on *Tariff Rates* is larger among the subset of WTO members than it is for the population as a whole (i.e., the Model 1 estimate of the direct effect). On the other hand, for the set of countries that do not belong to the WTO, democracies do not appear to have lower tariffs than autocracies. This suggests that Model 1 overstates the unconditional impact of

regime type on tariff rates. Hence, the assumption we make about whether methodological reductionism is appropriate to the world we model affects the inferences we draw about the domestic political relationships central to OEP scholarship.

The two models also produced very different inferences about the impact of WTO membership on national tariff rates. The analysis based on methodological reductionism controls for *WTO Membership* as a direct effect. This approach produces the counter-intuitive inference that, controlling for other factors, WTO members have higher tariffs than non-members. As Kubota and Milner summarize, “Many countries, it seems, choose to reduce their barriers before they enter the GATT or even if they have no plans for entering it. Furthermore, countries that are already in the international organization are much less likely to become more open, *ceteris paribus*.”³⁸ These findings are hard to reconcile with our broader understanding of the WTO process. Why would membership in an international organization established to promote trade liberalization and in which governments have negotiated eight tariff-reducing agreements, be associated with higher rather than lower tariff rates?

In contrast, treating *WTO Membership* as a mediating variable generates the inference that *WTO Membership* is associated with substantially lower tariff rates for the subset of countries that want to liberalize trade (democracies) than for all other countries. Moreover, in this specification, the independent effect of *WTO Membership* is reduced to the impact of *WTO Membership* when *Regime Type* equals zero, a condition that holds only for a very small number of cases (Mexico in the mid-1980s). This result makes sense: Mexico entered the GATT in the mid-1980s as one of the most heavily protected economies in the world. Treating *WTO Membership* as a conditional rather than a direct

³⁸ Kubota and Milner (2005, 134-5).

effect thus yields findings that are more easily reconciled with our broader understanding of the WTO process. It also aligns our understanding of the WTO's effect on tariff rates with the most recent research on the WTO's impact on trade flows.³⁹ Here too, then, the specific assumption we make about the appropriateness of methodological reductionism affects the causal inferences we draw.

Finally, the two empirical models produced very different inferences about how change in the frequency of democratic regimes in the developing world would shape the level of protectionism in the global economy. Consider the following counter-factual: would the global diffusion of democracy lead to global trade liberalization in the absence of the WTO? Analysis based on methodological reductionism suggests that the answer is "yes." Because the macro outcome is an additive function of micro characteristics, an increase in the global mean of democracy causes a reduction of the average global tariff rate. Analysis based on the assumption that methodological reductionism is inappropriate suggests the answer is "no." The global diffusion of democracy creates a predisposition for trade liberalization, and may even be necessary for trade liberalization, but is not sufficient to produce tariff reductions. The WTO process is also necessary as it allows governments to transform an underlying predisposition to liberalize trade into actual tariff reductions. Hence, different assumptions generate very different inferences about how changes in domestic politics affect international outcomes.

Differences of this magnitude would have large substantive implications were we to draw policy prescriptions from our research. The model based on methodological reductionism suggests that democratization drives trade liberalization much more than the WTO; in fact, the WTO appears to keep tariff rates higher than they would be in a world

³⁹ Goldstein, Rivers et al.(2007).

without the WTO. Thus, this model suggests that the best way to promote trade liberalization is to scrap the WTO and invest in the spread of democracy. The model that incorporates interaction between governments in addition to domestic politics yields very different policy recommendations. It too indicates that democracy is important for tariff reductions, but only in conjunction with the WTO process. Indeed, this model suggests that outside of the WTO, democratic governments do not reduce tariffs to a greater extent than autocrats. Governments intent on reducing tariffs should, therefore, encourage democratization and encourage democracies to join the WTO. Because the assumption we make about causality shapes the causal inferences we draw, it shapes whatever broader conclusions we draw from these inferences, such as policy recommendations. In this instance, the difference was extreme: should we scrap or sustain the WTO?

This brings us to our second conclusion. Methodological reductionism is sometimes appropriate for the causal relationships we study and in these cases it produces sound knowledge about causal relationships. Yet, methodological reductionism is not always appropriate. Sometimes it leads us astray. Which result occurs in any particular instance depends upon the nature of causal relationships under investigation. When causality moves linearly from private sector interests to domestic politics of aggregation to international bargaining, methodological reductionism generates unbiased inferences. When causality is not unidirectional, that is, when later-in-sequence processes affect earlier-in-sequence processes, methodological reductionism will produce biased inferences. This is what I call OEP's reductionist gamble: each time it investigates domestic politics in isolation from international politics, it bets that omitting international

politics will not lead the scholar to draw biased inferences about the causal relationships under study.

Conclusion: What's the Frequency?

Whether methodological reductionism is a good bet depends entirely upon whether it produces unbiased inferences substantially more often than it produces biased inferences. This in turn is a function of the frequency with which later-in-sequence processes affect early-in-sequence processes in the global political economy. Thus, for us to know whether methodological reductionism is a good bet requires information about causal processes that we do not possess and that continued reliance upon methodological reductionism inherently limits our ability to collect.

Yet, the theoretical models that constitute the core of contemporary macro-IR theory, as well as the empirical development of the global economy suggests that later-in-sequence processes influence early-in-sequence processes often enough to make untested reliance upon methodological reductionism a pretty risky bet. Standard models of strategic interaction posit that interaction has an important causal impact on governments' policy choices. Whether we conceptualize government interaction as a simple coordination problem, as non-strategic bargaining, or as more complex forms of strategic interaction, the point remains the same: interaction between governments generates outcomes different from those we would observe in the absence of interaction.

As an empirical matter, the number of economic policy choices that governments make through interaction with one another in international forums is increasing. The set of agreements that constitute global trade law, for example, extend far beyond tariffs to

include national regulations on service providers, health and safety regulations, product standards, and intellectual property rights protection. International negotiations are hardly restricted to trade. Financial regulations have been subject to multilateral negotiations and the recent financial crisis has re-intensified this process. Exchange rates are often the subject of formal agreements and ad hoc bargaining, as in the current U.S.-China relationship. Macroeconomic policies within the ever-expanding European Union are bound by common rules and *ad hoc* negotiated exemptions from these rules (the “Stability Pact). Few areas of national policy that affect the cross-border flow of goods, services, and capital remain untouched by international interaction. Globalization is thus increasing the frequency with which government policy choices are a product of interaction with each other in the global economy.

Even in the absence of explicit international negotiations, many national economic policies are a product of interdependent decision making. So-called race-to-the-bottom models, for example, assert that governments reduce taxes, relax labor and environmental regulations, strengthen property rights to attract foreign direct investment, and adopt other capital-friendly policies in response to or in anticipation of similar policy moves by other governments (see e.g., Basinger and Hallerberg 2004; Li and Resnick 2003). All such policy choices are highly interdependent, yet the nature of this interdependence is quite different from WTO bargaining. Rather than an observable bargaining process culminating in observable agreements, race-to-the-bottom dynamics are characterized by decentralized interdependence without explicit negotiation and agreement. This difference does not render the interdependent nature of policy choice any less important, it merely makes it more difficult to observe.

In other instances, external factors shape government choices through causal processes that are not strategic. Take, for example, the dynamics that drive exchange rate policy choice. Although OEP models of exchange rate regime choice focus almost exclusively on domestic politics,⁴⁰ shifts from one exchange rate regime to another often reflect external factors as well as changes in domestic politics. An individual government's willingness to use monetary policy to peg its exchange rate is a function of political and economic conditions at home and in the country to which it pegs. A change in the foreign interest rate could readily trigger a home government's decision to abandon a peg. Germany's decision to abandon the Bretton Woods system, for example, was as much a product of the Bundesbank's reluctance to embrace the Nixon administration's excessively loose monetary policy as it was a product of a change in the Bundesbank's monetary policy. Exchange rate policy can also be influenced by learning effects as governments observe the experience of their neighbors.⁴¹ Thus, even in the absence of explicit or implicit strategic interaction, it will be inappropriate to model foreign economic policy choices purely as a function of domestic politics.⁴²

The point here is not to pre-judge when methodological reductionism is and is not appropriate. This question cannot be answered in the abstract, because fundamentally it is an empirical matter. Instead, the point is that we cannot continue to assume that methodological reductionism is always appropriate. Our own macro-level theories tell us that methodological reductionism is frequently inappropriate. The evolution of the global

⁴⁰ For a survey of this literature, see the two excellent reviews of the political economy of exchange rates by Broz and Frieden (2001; 2006).

⁴¹ See Simmons and Hainmueller (2005)

⁴² The commitment to explaining policies as a function of domestic politics is so strong that OEP scholarship sometimes downplays international bargaining processes even where they are clearly important. Bernhard and Leblang (1999), for example, argue that EU-level processes played no significant causal role in the shift to pegged exchange rates among European governments after 1979.

economy tells us that methodological reductionism is less often appropriate now than it was fifty years ago. Consequently, OEP scholars must test whether rather than continue to assume that the domestic political processes that they wish to study in isolation from international processes can be studied in isolation from international processes without introducing large inaccuracies into the results. Testing whether rather than continuing to assume that methodological reductionism is appropriate is necessary simply to sustain OEP's assertion that it enables us to produce explanations "that 'know' well-specified causal relationships with some degree of certainty."⁴³

Not only will testing whether methodological reductionism is appropriate reduce the likelihood that we report biased findings, but it will also refocus our attention on the original questions that drove IPE scholars to study domestic politics. IPE moved down this path in order to better understand how the interaction between international and domestic political processes shapes developments in the global economy. Turning back to that question will in turn enable us to begin to assemble the sub-units we have examined into the larger whole that they comprise. In undertaking this project, we must embrace what Frieden and Martin have called the "troubling yet exciting possibility that what we think we have learned from studies lodged solely at the domestic or international level may have to be revisited when we take interactive effects more seriously."⁴⁴

⁴³ Lake (2009b, 52).

⁴⁴ Frieden and Martin (2002, 120).

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Table 1: Research Designs in IPE Articles in IO and APSR, 1996-2006

		Dependent Variable		
		Domestic	International	Total
Independent Variable	Domestic	56	6	60
	International	24	16	42
	Total	80	22	102

Table 2: Regime Type, the WTO, and Average Tariffs		
	Model 1	Model 2
Regime Type	-.32** (0.11)	0.13 (0.15)
WTO	2.28* (1.16)	3.38* (1.32)
Regime Type X WTO		-.50*** (0.13)
Population	35.02*** (6.45)	31.87*** (6.37)
GDP Per Capita	.001** (0.00)	.001** (0.00)
Economic Crisis	-0.47 (0.69)	-0.36 (0.68)
Bal. of Payments Crisis	0.77 (0.72)	0.83 (0.74)
IMF Program	0.14 (0.37)	0.14 (0.38)
Years in Office	-.18** (0.06)	-.18** (0.06)
Five Open	-1.57 (1.59)	-1.62 (1.54)
US Hegemony	22.54 (18.18)	21.97 (17.94)
Constant	2665.09*** (338.32)	2610.29*** (323.53)
Observations	694	694
Countries	97	97
R-squared	0.80	0.80
Wald chi2	790.84	7471.87
Prob>chi2	0.00	0.00
* p<0.05, ** p<0.01, *** p<0.001		

Table 3: Regime Type, the WTO, and the Sachs-Warner Index of Economic Openness		
	K&M Model	Model 3
Regime Type	.37***	.37***
	(.13)	(.13)
WTO	-4.77***	-4.88***
	(1.68)	(1.67)
Regime Type X WTO		-.12
		(.15)
Population	69.06***	68.73***
	(15.04)	(12.12)
GDP Per Capita	-0.000	-0.0003
	(.002)	(.002)
Economic Crisis	-.53	-.33
	(1.11)	(1.15)
Bal. of Payments Crisis	-0.02	-.04
	(.78)	(.79)
IMF Program	-.78	-.83
	(.64)	(.65)
Years in Office	-.08	-.09
	(.10)	(.10)
U.S. Hegemony	-55.15**	-52.96**
	(24.59)	(24.66)
Five Open	-2.63	-2.33
	(1.83)	(1.87)
Observations	872	872
LR Chi ²	869	869.62
Prob > Chi ²	0.00	0.00
Log Likelihood	-34.33	-33.95
* p<0.05, ** p<0.01, *** p<0.001		