

Overall Assessment of World Bank Research on International Trade

Gordon Hanson and Nina Pavcnik

In this document, we summarize our review of a random sample of recent World Bank research on international trade. The sample included 36 research outputs (24 individual research papers, 10 book-length outputs, one database, and one web-based resource) and covered projects on product standards, international migration, regional trade agreements, trade and technical change, and Arab economic integration (reviewed by Hanson); and intellectual property rights, the WTO in transition and developing countries, agricultural trade policy, and trade and poverty (reviewed by Pavcnik). In attached documents, we give individual reviews of each research project.

The research projects generated a wide range of products. Some are research papers suitable for or published in leading academic journals in economics; others are conference volumes or the equivalent. Another group of outputs, which is clearly geared toward a policy audience, attempts to synthesize existing research rather than produce new results. We attempt to evaluate each output according to our perceived value for its intended audience.

Our summary assessment identifies several positive contributions of Bank research on trade. The Bank has succeeded in extending the trade literature to address topics that are important for development policy but that have been neglected by academic research. While this work is not always at the forefront of the literature in terms of technique, it does help guide research toward areas where the social return is high. The Bank has also succeeded in producing excellent syntheses of what academic research has to say about trade policy, which also appear to have a high social return.

Yet, there are also areas where we feel Bank research has been deficient. These include variability in the quality of research (associated in part with the venues chosen as outlets for work), the low production of public research goods, the exclusion of several trade topics important for development policy, and a tendency to emphasize computable general equilibrium modeling over econometric analysis in empirical research.

I. Research Quality and Venues for Research Output

Bank research on international trade tends to appear in three types of outlets: academic journals, conference volumes of research papers, and monographs targeted toward policy makers. Not surprisingly, the research that has appeared in academic journals is by and large of high quality. Many of these papers are careful analyses of the impact of policy interventions. While for the most part these papers do not advance the research frontier in terms of theoretical or econometric modeling, they often succeed in producing credible estimates of policy impacts (frequently on subjects that other trade economists have ignored). Subjecting these papers to the discipline of peer review no doubt selects higher quality papers from among Bank output (and also increases their value added through incorporating referee comments).

The policy monographs, while not of uniformly high quality, also include many useful contributions. The Bank has followed a strategy of using its most senior research staff and contracting with leading outside academic economists to write these monographs, which has yielded high dividends. We found many of the monographs well written, informative, analytically sophisticated, and accessible (to an audience with knowledge at the level of advanced undergraduate training in economics). The academic

literature produces little in the way of such policy syntheses, suggesting that Bank support of policy monographs has high value added.

The most disappointing Bank research is that which has appeared in conference volumes of academic papers. While each conference volume contained at least a few papers that would have been suitable for publication in academic journals, the majority of papers in these volumes were below the standards of peer-reviewed academic literature. The best papers in conference volumes tended to be written by young academic economists whom the Bank had subcontracted to do research for particular projects (often these papers were offshoots of more substantial research papers that the economists had submitted to academic journals). Substandard papers tended to use dated empirical techniques (e.g., computable general equilibrium models), suffer from a lack of econometric identification (e.g., inadequate attention to selection or endogeneity issues), or fail to make a clear analytical point (e.g., long compilations of summary statistics without an integrative narrative). Among many of the papers published in conference volumes, the absence of the discipline imposed by peer review was evident. Of course, many of the conference volumes may have been subject to outside review before being published. However, in our experience reviewers hold conference volumes to a much lower standard than they do academic journal articles. Our best guess is that on at least some conference volumes the Bank spends considerable sums of money. Given the low quality of the research output, the returns on these funds appear to be low.

Bank research resources could be allocated more efficiently by focusing either on (a) research outputs that will be subject to outside review (as in the case of academic journals but not conference volumes), or (b) monographs that attempt to communicate

insights gleaned from research to the policy community. The value added in conference volumes consisting of research papers appears to be too low to merit much support.

II. Research Topics

Bank research on international trade covers a wide range of topics, including many that academic economists tend to overlook. Bank support for work on product standards, the WTO, international migration, Arab economic integration, and intellectual property rights has helped close gaps in the literature.

Underrepresented in Bank projects are papers on trade and growth, trade and institutions, and multinational firms. While these issues have received much attention in the literature, the Bank has had relatively little to say on these topics. One may argue that, because of the volume of research on these issues done by economists outside the Bank, the lack of Bank support is not important. However, these are issues that are central to the most important debates about trade policy: Are multinationals and foreign direct investment good or bad for developing country welfare? What is the causal impact of trade on growth? Which institutions are most important for promoting openness? One has the impression that the Bank has a strong institutional stance on these issues, but one that is not necessarily reflected in results of Bank supported research.

More importantly, the Bank has not examined sufficiently the impact of trade on poverty or the constraints on export growth in developing countries. Most Bank research on trade and poverty tends to be done *ex ante*, asking the question (often in the context of a computable general equilibrium model): What will be the impact of proposed trade reforms in particular countries on poverty? There is relatively little Bank research of which we are aware that uses household data on consumption and expenditure to examine

how actual policy reforms have affected poor households. This issue has also been overlooked by academic research, which, with regard to the impact of trade on the distribution of income, focuses overwhelmingly on the impact of trade on wage inequality. One has the sense that institutionally the Bank advocates the view that trade liberalization reduces poverty, but there is little careful ex post analysis by the Bank or anyone else that supports this conclusion.

Another under-studied topic is why so few developing country firms export. Recent theoretical literature by Melitz, Eaton and Kortum, and others in international trade identifies fixed costs of exporting as important in explaining variability in the productivity, size, and export behavior of developed country firms (there is a growing empirical literature that is consistent with this theory). However, there is little rigorous empirical work on factors that constrain the ability of developing country firms to penetrate world markets. Constraints on exporting might differ considerably in developing and developed country contexts. Credit constraints, poor distribution networks, and distortions in markets for power, water, telecommunications, and other infrastructure are all candidate explanations for why large domestic firms and multinational enterprises tend to dominate developing country international trade. To examine these issues carefully, we need better data on developing country firms. Existing data sets (e.g., for manufacturing plants in Chile, Columbia, Mexico, and Indonesia) tend to be limited to medium and large plants, which miss an important part of the distribution of firms (especially for evaluating trade and poverty). There is considerable scope for the Bank to address these shortcomings in research, by drawing on

recent insights from trade theory and Bank resources for collecting original data. The returns from doing so would likely be high.

III. Public Research Goods

Central to empirical research on developing countries is the creation of new data sources. In international trade, three sources of data are important: data on bilateral trade flows and trade costs between countries, data on firm inputs and outputs, and data on household expenditure and production. The Bank research we reviewed has created four types of data resources: quantitative estimates of emigrant stocks by sending country and receiving region, a database of WTO dispute settlements, qualitative surveys of trade costs facing firms, and software for using trade data created by the UN. The data on emigrants stocks (compiled by Docquier and Marfouk) are a valuable resource that will help advance research on international migration. The data on WTO dispute settlements (compiled by Horn and Mavroidis) is a valuable resource that will influence future empirical research on WTO disputes, although it will likely benefit a smaller research community than the data on emigrants stocks. The qualitative data on trade costs (for Arab and African countries) are likely to be of little value to the research community. The WITS (World Integrated Trade System) software has been used by trade researchers inside and outside the Bank (although we had some difficulty in making it work).

In our view, the Bank has produced far too little in the way of public research goods. Central to research on international trade is data on bilateral trade flows and trade costs. The WITS software enables one to utilize UNSD Comtrade trade flow data and UNCTAD Trains trade cost data relatively easily. However, one still needs to purchase access to Comtrade and Trains from the UN (a one-year subscription to Comtrade is

\$3750). There would be large returns to the Bank (and to the research community in general) from making Comtrade more accessible. While recent years of trade data are likely to be of high value to private sources, it would seem that the Bank could negotiate with the UN to make older trade data (say, beginning three years in the past and going backward) available at lower cost. By making these available and accessible to the research community at low cost, the Bank could effectively decentralize research on the determinants of trade flows. The free availability of household level data in the United States (CPS, PUMS, NLS, PSID) has helped create a strong empirical research culture in applied microeconomic research. The empirical research culture in international trade is still nascent, in part because core data sets in the field have been slow to emerge.

More importantly, the Bank has not done enough to compile comprehensive data on trade costs. Fundamental to Bank analysis of trade reform is how industries, regions, firms, and households respond to changes in trade barriers. However, there is literally no current, comprehensive data on bilateral trade costs available from any source. These data could be constructed by combining Trains data on tariffs and non-tariff barriers with Bank data on product standards and technical barriers (data on transportation costs could be incorporated from other sources). (Trains data, while a useful input for empirical analysis, have many holes, do not incorporate data on preferential trade agreements, and require substantial cleaning before they can be used.) The Bank has undertaken commendable efforts in this direction through creating the World Trade and Production Data Base (which we did not review), which combines UNIDO production data with Comtrade bilateral trade data and Trains tariff and non-tariff data. However, these data

are available for a limited set of countries and at a high level of aggregation (3 digits) and they stop in 1999.

Given Bank concerns about the impacts of trade reform, it would seem to be strongly in its institutional interest to promote the analysis of how changes in trade costs affect economic activity. If the Bank were to create data on trade costs, it would dramatically increase research output on the topic. Indeed, the Bank could rely on academic economists to do much of the research it cares about at little or no direct cost to the Bank – independent researchers would have a strong incentive to do the research themselves (since such work would be highly publishable). The current environment in international trade is what labor economics would be like with data on individual wages but without data on education or labor market experience. Without comprehensive data on trade costs it is simply not possible to address the policy questions on trade that are central to Bank concerns. One might say that constructing such data would be expensive. However, for the most part the data could be compiled from existing sources (admittedly, with needs to fill in important gaps). Given Bank expenditure on qualitative surveys of trade costs that have little research value, it appears that it could find many of the funds needed to create a trade cost data base simply by reallocating existing resources.

IV. Empirical Methodology

Bank empirical research tends to be dominated by the analysis of ex ante policy changes (e.g., what would be the impact of Arab economic integration on Egypt) and the use of computable general equilibrium models. While there are good reasons for this approach, the resulting research portfolio is unbalanced. Missing in Bank research is

sufficient attention to analysis of ex post policy changes and the use of modern econometric techniques.

Of course, member countries are acutely interested in the projected impact of proposed policy changes. CGE models are sometimes a reasonable means of making such forecasts. However, CGE models produce worthwhile results only if their underlying behavioral assumptions are correct and if their assumed parameter values are accurate. Little Bank research examines the validity of behavioral assumptions or the accuracy of parameter values in applications of CGE models. More useful to policy makers would be careful ex post analysis of how observed policy changes have affected firms and households in specific countries. Such analysis requires data (which is further evidence of the importance to the Bank of creating new data sources) and appropriate empirical methodology.

Consider, for instance, a Bank project we examined related to the proposed economic integration of Arab countries. Most of the empirical analysis used CGE models to forecast the impact of various policy changes. There was virtually no discussion of how economic integration has affected countries in other regions (in part, because there are relatively few such analyses). While in many cases the CGE models were competently executed, their value to the policy discussion on Arab economic integration is unknown. There are few data available with which to calibrate these models and their behavioral assumptions are untested in the Arab context. As an alternative, imagine if policy makers in Arab countries could examine not just the results of CGE models, but also a menu of results on the econometrically estimated impact of actual policy reforms in Africa, Asia, and Latin America. One might imagine that they

would find econometrically estimated results from other countries at least as informative as CGE models designed for the Arab economic environment. (Were we to evaluate such evidence, we would strongly favor econometric results.)

Further evidence in favor of shifting Bank research away from CGE models and toward econometric analysis comes from the academic literature. Leading journals in economics publish little in the way of CGE analyses of trade policy. Most work on CGE models is consigned to conference volumes or to second or third tier journals. Among leading young empirical economists in international trade, there are none who actively use CGE modeling in their research. The absence of CGE models in the literature and in the research portfolios of young trade economists reflects the prevailing sentiments of the profession that their results may be unreliable. Yet, the Bank continues to rely on CGE models as the core methodology in research on trade. We could strongly recommend that the Bank increase the weight it places on econometric work.

V. Summary

The Bank has succeeded in pushing research on international trade in directions the academic literature has explored inadequately. Research supported by the Bank has also succeeded in communicating insights from the trade literature to policy makers. Bank research on trade could be enhanced by subjecting more Bank supported work to the discipline of peer reviewed academic journals, addressing more carefully the impact of trade on poverty and the nature of constraints on developing country exports, creating more public research goods on trade, and shifting empirical work away from CGE models and toward econometric analysis.

EVALUATION OF INDIVIDUAL RESEARCH PROJECTS

Gordon H. Hanson

36 Product Standards - Total

Wilson et. al.

Saving Two in a Billion

Description

This paper examines the potential impact of changes in EU regulations on aflatoxins on agricultural exports in Africa. Aflatoxins are a compound found in agricultural products that can cause cancer and other health complications. During the period the authors examine, EU countries had differing standards of the maximal level of aflatoxins allowed on food imports (where these levels also vary across agricultural products). The EU is considering harmonizing its aflatoxin standards, and the proposals under consideration would entail increases in standards (ie, lowering the maximal quantities allowed) for countries in the region whose current standards are relatively low.

The authors estimate a gravity model of trade in which they regress bilateral trade in agricultural products (between African countries and EU countries by year during the 1990s) on GDP per capita in importer and exporter countries, control for trade costs between country pairs (eg, distance, a dummy for common colonial history), year dummies, and the aflatoxin standard on the product in the importer country (where coefficient estimates are allowed to vary across types of agricultural products). The authors use the coefficient estimates to predict the change in trade that would result if aflatoxin standards were harmonized across EU countries to levels under consideration.

The predicted result of the policy change is that African exports fall considerably but only a handful of lives in EU countries are saved.

Evaluation

The authors address what appears to be an important issue. However, their application of the gravity model of trade is below the current standard in the literature. Since the article was published in 2001, it is unfair to hold the authors accountable for advances in the literature that post date their paper (or that were concurrent with their work). Still, what we've learned about the gravity model in the last five or six years means that their approach is problematic and one should be cautious in interpreting their results.

Problems arise because they do not control for other trade barriers (eg, tariffs, quotas) or multilateral resistance in importing and exporting countries (as suggested in important work in the early 2000s by Anderson and van Wincoop). There are many reasons to suspect that a country's willingness to impose more stringent health standards on food imports may be correlated with other trade barriers or with the country's trading opportunities. This means the authors' econometric results are difficult to interpret and the policy simulation exercise may not be meaningful.

Annex 3: Research Quality Indicator Form

S	Superior
AA	Above Average
A	Average
BA	Below Average
U	Unacceptable

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed			X		
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework			X		
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources			X		
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling			X		
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence			X		
Appropriateness of the recommendations			X		
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy				X	
Actual or likely impact of research on:					
Government policy				X	
Future analysis				X	
The development community in general				X	
Overall Quality of Research			X		

Description

This volume examines technical barriers to trade. I will give a brief review and evaluation of each chapter and then an overall evaluation of the volume.

Maskus and Wilson examine the potential impact of technical regulations on international trade. Such regulations include sanitary restrictions on imported food, provisions on genetically modified organisms and the chemical content of products, and ISO type quality standards. The authors ask whether these regulations are benign or may in fact qualify as non-tariff barriers. In the opening chapter the authors illustrate how little is known about technical barriers, discuss recent trade disputes relating to technical barriers, and summarize the economic justification for having technical barriers in place. This piece is a cogent introduction to the topic. One issue on which I would like to have seen more detail is the manner in which domestic firms use technical barriers as a strategic tool to raise the production costs of foreign rivals.

Maskus, Otsuki and Wilson develop an empirical framework for examining the impact of technical barriers on trade. They provide a useful and thorough summary of past empirical work, which has included qualitative surveys, econometric analysis, partial equilibration calibration exercises, and computable general equilibrium models. They identify empirical problems associated with barrier measurement, scale economies, and interactions between distortions. They propose a research program that would entail collecting data through surveys of manufacturing firms, estimating gravity models of trade (with technical barriers included as explanatory variables), estimating cost/production functions at the firm level, and carrying out simulation exercises. The authors outline an ambitious project that addresses an important issue. One missing

element is consideration of strategic interaction between firms. Modern empirical research in industrial organization devotes considerable energy to the estimation of consumer demand, which is essential for examining how firm decisions on prices and quantities affect market outcomes. The approach in this chapter, by contrast, comes at the problem primarily from the supply side, without proposing the collection of consumer expenditure data that would allow application of modern IO techniques.

Baldwin examines the extent to which technical trade barriers amount to regulatory protectionism. First, he models the impact of technical trade barriers in a simple Cournot setting. Their impact on trade depends on whether they affect fixed or variable costs of production (interestingly, the bias of such barriers may work for or against domestic firms). He then provides a brief discussion of empirical evidence on the impact of liberalizing technical trade barriers in the EU. He identifies three important issues in the liberalization process: the difficulty in forecasting the impact of changes in technical trade barriers (as opposed to easier to measure barriers such as tariffs), the practical difficulty of harmonizing barriers across countries, and political economy considerations which include interactions in between liberalizing tariffs and technical barriers. Baldwin concludes that we may be observing the emergence of a two-tier trading system, in which developing countries occupy a second tier, shut out of many developed country markets through technical trade barriers. The analysis in the chapter is sophisticated, thorough, and accessible. Baldwin uses simple trade models to draw important insights on how technical trade barriers can become obstacles to trade, with their effects being particularly important for developing countries. This is the only chapter in the volume to take political economy issues seriously, making the value added of Baldwin's work high.

Ganslandt and Markusen incorporate product standards into a standard general equilibrium trade model (with two countries, two factors of production, and two sectors). The authors consider standards that take the form of pure cost increases (with no consumer value), discriminate against foreign producers, complement or substitute each other across products, or segment markets by making products more differentiated. The different versions of the theoretical model are solved numerically (rather than analytically). The analysis is sophisticated but presented in an accessible way. The approach of giving a menu of models lets the reader pick and choose among environments, each of which may be more or less relevant for particular countries. The presentation could have been briefer. However, it is useful to have the issues laid out in a clear theoretical construct.

Gandal gives an industrial organization perspective on quantifying the impact of standards. He explains that standards may be de facto (the result of market decisions as with the Windows operating system), voluntary agreements between firms (as with the development of CD technology), or set by national standards bodies. The key economic issue regarding standards and compatibility has to do with network effects. Where they exist, setting standards may be welfare improving (but can just as easily lower welfare by getting standards wrong). The chapter surveys theoretical and empirical research in IO and a small trade literature on product standards. Gandal then proposes to study the following industries: television, consumer electronics, PC operating systems, and wireless telecommunications. This is a theoretically well-grounded proposal and brings in a modern IO perspective that is missing in many of the other chapters. However, the approach is centered on the interaction between innovation and standard setting, and so may be more relevant to developed countries than to developing countries.

Nielsen and Anderson discuss genetically modified organisms and trade policy. They give an overview of genetic engineering in agriculture, national regulations on GMOs, and international trade agreements that address GMOs. To examine the potential effects of GMO adoption, they use the GTAP model. They derive results under different scenarios including the EU choosing not to adopt GMO technology, EU bans on GMO imports, and a shift in EU preferences against GMO products. It is difficult to interpret their empirical results. Little reason is given to suggest that the GTAP model adequately captures the forces affecting innovation, consumer preferences, or the political economy of GMOs. My sense is that this is an application of a CGE model that does not appear to give much thought to why GMOs are an important issue politically. Shocks to technology and political institutions are simply ignored. The results are speculative and provide little basis for policy.

Oyejide, Ogunkola, and Bankole examine the trade impact of sanitary and phytosanitary standards (SPS) in Sub-Saharan Africa (SSA). The chapter gives an overview of Africa's export structure in agriculture, the non-tariff barriers that exports from the region face, and SPSs in Africa. It also outlines a modeling approach for considering the impact of SPSs on Africa. The chapter provides little more than a general outline for future work. No empirical work is presented. The Wilson et al. article (reviewed earlier) on "Saving Two in a Billion" estimates a gravity model of trade for Africa and considers the impact of product standards, suggesting that empirical work on SPS in the region is feasible. One would expect more from a chapter than simply a brief outline for future work.

Hilton and Levinson discuss the measurement of environmental compliance costs in the United States, where the literature on the economic consequences of environmental regulations is relatively well developed. The chapter gives an overview of existing

empirical work, highlighting the endogeneity of regulations and the unknown vintages of capital stocks as important issues that complicate estimation. They give simple results on pollution abatement costs and expenditures in the United States, using a production function approach. They discuss methods for addressing the endogeneity of firm characteristics and the presence of important omitted variables. There is little discussion of how these results might apply to developing countries.

Evaluation

This volume is an extended research proposal for examining product standards and technical barriers and how they affect international trade. These are important and under-explored sources of trade frictions between countries. However, the volume makes only modest progress in terms of new research. The chapters cover an extremely wide range of trade barriers, providing breadth to the analysis but at the cost of depth. Only the Baldwin and Markusen chapters provide new results, and these are purely theoretical. The volume does contain useful literature surveys (those by Maskus, Gandal, and Levinson). However, the value added of a collection of proposals and literature surveys is small. The expense is justified only if the effort ultimately leads to substantial new research. The mix of theory, literature surveys, and proposals in the volume doesn't form a coherent whole. If the purpose of the volume is to propose new research, it could have accomplished this task in less space (and probably at less expense).

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S	Superior
AA	Above Average
A	Average
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Topics					
Importance of the issues addressed		X			
Clarity of the project focus and stated objectives			X		
Analysis					
Theoretical/conceptual framework			X		
Empirical application				X	
Statistical and econometric methods				X	
Use of existing knowledge and resources		X			
Data					
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Data compilation, cleaning and cataloging				X	
Survey design and sampling				X	
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations				X	
Extent to which conclusions are based on analytic evidence			X		
Appropriateness of the recommendations			X		
Appropriateness of output form (working paper, book, database, etc.) for intended audiences			X		
Availability of translated outputs where appropriate					
Extent to which research:					
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Government policy				X	
Future analysis		X			
The development community in general			X		
Overall Quality of Research			X		

Description

This paper examines the market for maritime transport services. It begins with a discussion of the practices that international shipping companies use to cartelize the industry, the manner in which countries frequently abet cartelization, and how changes in shipping technology (eg, containerization) and changes in U.S. antitrust policy have affected cartelization. The authors conclude that there exists circumstantial but no hard evidence of cartels in international shipping. They move on to discuss the tendencies for monopolies to control port services and strategies countries might pursue to increase competition in shipping services.

In the second part of the paper, the authors develop an empirical model of bilateral transport prices for U.S. imports (measured as liner charges as a share of import value by six-digit industry). They regress these prices on distance from the United States to the trading partner; the containerization rate in the industry segment; indicators of price-fixing arrangements, cooperative arrangements, and port services; and other controls. The main findings are that distance and price fixing are positively correlated with transport prices and containerization is negatively correlated with transport prices. In the final section, the authors use the regression estimates to calculate the price impact of breaking up price fixing and other arrangements that allow cartelization in shipping.

Evaluation

The authors address a moderately important topic in international trade. It warrants attention because there has been little research on competition in shipping services.

The thick description of international shipping practices in the paper is useful. However, I have concerns about the empirical analysis. The authors make no attempt to control for the endogeneity of price fixing arrangements or other cooperative arrangements. This makes the regression results difficult to interpret.

And the empirical model is reduced form. As such, we do not know whether the regression coefficients are picking up supply or demand factors. We do not know whether price fixing arrangements are correlated with supply or demand shocks, meaning that the regression parameters provide little basis for using the econometric model to forecast the impact of eliminating price fixing. I do not find the policy analysis aspect of the paper credible. The empirical analysis could have been embedded in a gravity framework. I am puzzled why the authors did not do so. David Hummels has written many recent papers on transport costs, but the authors cite only one of his articles.

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Description

This project constructs estimates of the stocks of working-age emigrants in OECD countries for 193 source countries in 1990 and 2000. Working age is defined to be individuals at least 25 years old. The authors place no restrictions on the age of arrival for emigrants in host countries. Stocks are broken out separately for three education levels (primary, secondary, and tertiary) and four OECD host regions (North America, Europe, the EU 15, and Asia and Oceania). The authors construct estimates using population census data on immigrants in OECD countries and resident populations in source countries. They provide detailed documentation on discrepancies in definitions across various data sources. The data are presented in hard copy in the text and available in electronic format on Docquier's website.

Evaluation

This project represents an enormous advance for research on international migration. Prior to this study, there were simply no reliable, cross-country estimates of the stocks of international migrants. The data the authors have put together will allow (for the first time) meaningful cross-country analysis of the determinants of emigration. The authors appear to be careful in how they construct the data, going to painstaking efforts to obtain information from a huge variety of sources. They provide a helpful and thorough discussion of the limitations of the data and potential problems involved in

comparing estimates across countries. In a few instances, they impute data values for specific countries. They make it quite clear which cases these are.

One minor criticism is that the authors do not report estimates for the same cohorts in the two years (e.g., 25-45 year olds in 1990 and 35-55 year olds in 2000). Cohort-level data would enable researchers to ask many more questions of the data. Another minor criticism is that the authors do not report data on individual host countries; they only report the stock of emigrants in regional host country groupings. Again, having emigrant stocks for source-country and host-country pairs would expand the set of issues that could be addressed. The authors could easily expand the data to include these features since this information is contained in the raw data they have compiled (and I expect they will do so in the future).

A more important criticism is that the Bank has not done much to publicize these data, which represent an important public good for the international migration research community. I would have thought that after funding such a project, the Bank's website would have featured these data in an easy to find and download format. However, I could not find the data online at the Bank's site. I did find them on Docquier's website once I emailed him and he helpfully directed me to the link.

With minor revision, I would have happily accepted this paper for publication in the *Journal of Development Economics* (it has been published in a conference volume).

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Government policy	X				
Future analysis	X				
The development community in general	X				
Overall Quality of Research	X				

Description

This book is a collection of research papers on immigration. The first four chapters examine the impact of migrant remittances on developing countries; the second four chapters examine emigration of high skilled individuals from developing countries and issues associated with brain drain. I provide brief reviews of each article (in the order in which they appear in the volume).

Mora and Taylor use a survey of households in rural communities in Mexico (which Taylor conducted) to examine the self-selection of migrants. The survey was conducted in two waves: one in 2002 and one in 2003. They examine how individuals decide between not migrating, internal migration, and external migration, and, among these outcomes, whether they choose farm or non-farm employment (using a limited dependent variable model and individual, household, and community characteristics as regressors). Migration outcomes are evaluated by examining individual location and occupation choices between 2002 and 2003. This paper addresses an important issue. However, the analysis is subject to a number of flaws. Borjas has written extensively on migrant selection but none of his work is cited. The data are poorly discussed. The authors use the data to construct retrospective histories but acknowledge few of the problems inherent in such data. The authors do not discuss selection out of the sample in terms of households present in 2002 that had moved in their entirety by 2003 (and so were unavailable to be surveyed); nor do they discuss households that had migrated from the surveyed communities prior to the baseline survey. While the paper is ostensibly about selection, the analysis of selection is below the standards in the literature. This is

unfortunate because the authors appear to have obtained a novel data source on rural households.

McKenzie examines how health outcomes for children differ in Mexican households with and without migrants living abroad. His main finding is that children in migrant households have better health outcomes. He recognizes that while one might be interested in the specific impact of remittances on child health, it is difficult to identify the effects of remittances on household outcomes apart from the other effects that migration may have. He pursues an instrumental variables strategy to account for the endogeneity of household migration behavior. While his approach to econometric identification is careful, he is somewhat more confident in his instrument than I might be. Nevertheless, this is a well-crafted paper that understands the literature and uses techniques that are at the frontier of empirical analysis.

Adams examines the impact of remittances on family income and expenditure in Guatemala. There is an obvious selection issue in that households with migrants abroad may differ in their unobserved characteristics. Adams' approach is to estimate income as a function of household characteristics for households without migrants abroad. He uses a Heckman selection estimator to account for the fact that he looks at non-migrant households only, where he assumes that age of the household head and household wealth affect household migration but not income. He finds that the selection variable is statistically insignificant in the income regression and then proceeds as though he can ignore selection issues. My sense is that this paper is below the standards in the literature. The exclusion restrictions he imposes on the estimation of income seem hard to support with either theory or empirical evidence from other countries. The paper is not skeptical enough about the ability of the author's approach to deal with the selection issues the author himself identifies. While the conclusions that remittances reduce

poverty seem sensible, I would have little confidence in the precise estimates the paper produces.

Yang and Martinez regress the change in poverty on the change in remittances across households in the Philippines with migrants living abroad. They instrument for household remittances using changes in exchange rates in migrants' host country with respect to the Philippines associated with the Asian financial crisis in 1997 (similar to the strategy in the other Yang paper I review below). Higher remittances associated with the exchange rate shock raise household remittances and income and reduce the likelihood the household is in poverty. There is weaker evidence that remittances affect non-migrant households in a community through spillover effects. The paper has a clear and sophisticated discussion of econometric identification issues. The authors have digested the relevant literature. The paper is careful and produces answers that are credible. They are cautious in interpreting their results. This is a high quality paper that advances research on remittances.

The Docquier and Marfouk chapter is excellent and I discuss it independently elsewhere in this review.

Schiff surveys theoretical literature on the possibility of a brain gain from emigration. The idea is that by emigrating, high skilled individuals raise the returns to education in source countries, leading possibly to higher levels of educational attainment than would have resulted without individuals having possibilities for emigration. The chapter also presents some simple empirical evidence in support of the brain gain hypothesis (which is not meant as a serious empirical test of the theory since the regressions considered suffer from obvious endogeneity problems). The paper tends to take the role of advocating the brain gain literature and is not as skeptical of research in the area as one might hope.

Ozden develops a simple model of how migrants from a developing country insert themselves into destination country labor markets. Migrants from a country are more likely to end up in high skilled jobs the higher the skill level in their source country, the more costly it is for low skilled individuals in their source country to migrate, and the more costly it is for high skilled individuals from other countries to migrate. The author then proceeds to regress the portion of U.S. immigrants with a tertiary education by source country on distance to the United States, existence of military conflict in the source country, whether the country speaks English, and other controls. The results show support for the model's predictions. While the main question is important, the paper advances the literature by only a modest amount. The predictions of the model are unsurprising and the empirical results could be consistent with a wide class of models about migration. The paper serves as a starting point for research on skilled migration but it does not push the theory or empirics as far as one would hope.

Chelleraj, Maskus and Mattoo ask whether skilled immigration matters for innovation in the United States. The paper documents trends in employment of skilled immigrants in the United States by category of immigrant admission (students, temporary workers, etc.). The paper goes on to summarize results by the authors in another paper in which they estimate a patent production function for the United States using as arguments the supply of foreign graduate students, skilled immigrants and other factors. In this paper, they find that skilled immigration enhances U.S. innovation (measured in terms of patents). While the analysis in the paper the authors discuss seems quite interesting, the value added in summarizing the paper in this volume seems to be rather low. This chapter is derivative of the authors' other work and adds little new material.

Evaluation

There is high variance in the quality of contributions in this volume. The chapters by McKenzie, Yang and Martinez, and Docquier and Marfouk are high quality papers that meet the standards of the literature. The papers by Schiff and Chelleraj et al. are brief surveys of other work. The chapter by Ozden outlines an interesting approach for examining the determinants of skilled migration but does not push very hard in applying this approach. The chapters by Adams and Mora and Taylor are below the standards in the literature. Another problem with the volume is that the two sections, one on remittances and the other on skilled migration, have little to do with one another. Overall, the volume lacks coherence. The Bank would be better served by supporting research that is geared toward peer-reviewed academic journals than by producing edited volumes of this sort that on the whole fail to meet publication standards in the academic literature.

Annex 3: Research Quality Indicator Form

S	Superior
AA	Above Average
A	Average
BA	Below Average
U	Unacceptable

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives			X		
Analysis					
Theoretical/conceptual framework		X			
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources			X		
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling			X		
Output Quality					
Writing quality (clarity, organization, etc.)			X		
Clarity of conclusions and recommendations				X	
Extent to which conclusions are based on analytic evidence			X		
Appropriateness of the recommendations			X		
Appropriateness of output form (working paper, book, database, etc.) for intended audiences			X		
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research			X		

Description

This paper examines the behavior of Philippine households with migrants living abroad before and after the 1997 Asian financial crisis, during which the currency of the Philippines depreciated substantially. Yang is particularly interested in the response of remittances and the impact of remittances on household spending patterns. For a sample of Philippine households with migrants abroad, Yang finds that households with migrants in countries that had a larger exchange-rate appreciation relative to the Philippines received larger increases in remittances. These households also experienced larger increases in educational attainment by resident children, expenditure on education and durable goods, and self-employment. The theoretical framework used in the paper is simple but appropriate to the question being asked. Yang appropriately views the income shock associated with the exchange-rate-induced increase in remittances as transitory, in which case its primary impact would be to reduce borrowing constraints (as the results appear to confirm). He also provides a careful discussion of whether migrants might non-randomly choose to which countries to migrate, and controls for migrant selection into host countries to the extent that he can.

Evaluation

The results of this paper represent an important advance for research on immigration. There is tremendous interest in the impact of remittances on migrant households and migrant sending countries. However, the research is plagued by an

obvious endogeneity problem. Which households send migrants abroad is not random. As a result, we may confound the effects of remittances on households with the impact of unobserved household characteristics that influence migration behavior.

Yang comes up with a clever and simple instrumental variances strategy to deal with the endogeneity of household migration. He is careful in the use of data, thorough in his analysis of causality, and admirably cautious in his interpretation of the results. Yang shows a firm command of the literature and a willingness to immerse himself in the data. His are the first convincing results that remittances improve outcomes for children in migrant households. While other studies have found a positive correlation between education and household remittances, these results have been very hard to interpret (due to the lack of serious attempts to address the endogeneity of migration).

One minor criticism is that I did not see why he focused on nominal rather than real changes in the Philippine exchange rate. In theory, it is real appreciations that should matter.

Annex 3: Research Quality Indicator Form

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<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework			X		
Empirical application	X				
Statistical and econometric methods		X			
Use of existing knowledge and resources	X				
Data					
Awareness of other data sources	X				
Data compilation, cleaning and cataloging	X				
Survey design and sampling	X				
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence	X				
Appropriateness of the recommendations	X				
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues	X				
Provides a sound basis for policy		X			
Actual or likely impact of research on:					
Government policy		X			
Future analysis	X				
The development community in general	X				
Overall Quality of Research	X				

26	Regionalism & Development - Total	Schiff & Winters	Regional Integration & Development
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Description

This volume draws on theoretical and empirical research on regional economic integration to provide guidance for policy makers. The motivation is to address new developments in regional integration, involving the move from closed to open regional integration strategies, a trend toward deep integration (moving beyond simple reduction of tariffs and NTBs), and the formation of North-South trade blocs.

The volume examines seven issues regarding trade blocs: the economics of trade preferences (a summary of arguments about trade creation and trade diversion), the design of regional trade agreements (choices of preferential versus unilateral liberalization and North-South versus South-South initiatives), regional integration and investment (the use of bilateral investment treaties and the use of RTAs to enhance policy credibility), the interaction between integration, economic growth and agglomeration (where the interaction is more beneficial under North-South than under South-South integration), the impact of regional integration on domestic policies (how including domestic policies in RTAs can be messy, how the WTO and other multilateral institutions can help on these issues), the political ramifications of regional economic integration (especially regarding peace and security), and third country effects (negative spillovers due to trade diversion, incentives for domino regionalism). The volume closes with a set of rules of thumb for regional integration initiatives, including advice to make sure RTAs foster competition, to opt for North-South over South-South integration, to emphasize bright line standards in policy (to enhance credibility), and to recognize that the costs of running and implementing RTAs may be large.

Evaluation

The volume is well written, thorough, and analytically sophisticated. The language, while laced with theoretical concepts, is accessible to someone with an advanced undergraduate education in economics. The approach is not overly didactic and recognizes the variation in contexts in which countries might be considering regional economic integration. My sense is that this is an excellent guide for policy makers.

My one complaint is that the arguments are buttressed more by theoretical models than by empirical results from econometric analysis (there is more empirical evidence in the sections on the impact of changing trade costs and on trade and growth; in the other sections there is a noticeable lack of empirical work to support the authors' claims). While the exposition of theory is clear, the lack of abundant empirical support weakens the recommendations. The absence of evidence is not a fault of the authors – there simply isn't that much rigorous ex post empirical analysis of the impact of regional integration efforts (the volume is admirably skeptical about the usefulness of CGE models in evaluating the impact of regional trade agreements). The limited state of development of the empirical literature highlights the need to support more research in the area. Bank documents such as this would be far more effective if they were backed up by careful empirical results from econometric studies.

Annex 3: Research Quality Indicator Form

S	Superior
AA	Above Average
A	Average
BA	Below Average
U	Unacceptable

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework	X				
Empirical application			X		
Statistical and econometric methods				X	
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources		X			
Data compilation, cleaning and cataloging			X		
Survey design and sampling					
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy	X				
Actual or likely impact of research on:					
Government policy	X				
Future analysis			X		
The development community in general		X			
Overall Quality of Research		X			

26	Regionalism & Development - Total	Chang & Winters (2002)	How Regional Blocs Affect Excluded Countries: the Price Effects of MERCUSOR
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Description

This project examines import prices in Brazil before and after the implementation of Mercosur. The authors begin by documenting a decline in import prices in Brazil after Mercosur for nonmember countries (Japan, Korea, and the United States) but not member countries (Argentina). They proceed to construct a simple oligopoly model of export pricing that allows for strategic interaction between producers from different countries. As is standard in the literature, the authors show that the pass through of changes in wages, exchange rates, or tariffs to prices depends on the elasticity of demand. With Bertrand pricing in differentiated products, as the authors assume, price are strategic compliments, in which case reductions in tariffs by Brazil for one country (eg, Argentina) will lead other countries to lower their prices.

Using highly disaggregated data on import prices in Brazil, the authors regress bilateral import prices by product on the importer's tariff, the tariff for other importers, and cost controls. They find strong evidence that prices are strategic compliments. For instance, when Brazil lowers tariffs on Argentina, U.S. producers reduce the prices on their goods in Brazil. The authors conclude by calculating the welfare effects of Mercosur on nonmember countries. Mercosur modestly lowers welfare in non-member countries.

Evaluation

This is a clever paper that is well grounded in theory and well executed. The empirical approach is simple yet convincing. The authors address an important yet

under-researched issue. We simply do not know very much about the competitive and welfare consequences of regional integration on excluded countries.

I have two minor concerns about the analysis. One concerns a lack of effort to control for the endogeneity of tariffs and tariff changes. A second is that the authors do not explore variation in price effects across sectors (although they appear to have done this in a previous version of the paper, with referees perhaps asking that the analysis be removed to shorten the length of the final manuscript).

Annex 3: Research Quality Indicator Form

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U	Unacceptable

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<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework		X			
Empirical application		X			
Statistical and econometric methods		X			
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources		X			
Data compilation, cleaning and cataloging		X			
Survey design and sampling		X			
Output Quality					
Writing quality (clarity, organization, etc.)	X				
Clarity of conclusions and recommendations	X				
Extent to which conclusions are based on analytic evidence	X				
Appropriateness of the recommendations	X				
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues	X				
Provides a sound basis for policy	X				
Actual or likely impact of research on:					
Government policy	X				
Future analysis	X				
The development community in general	X				
Overall Quality of Research	X				

Description

This paper examines the correlation between TFP at the national level and trade-weighted R&D in foreign countries. This approach was first developed in research by Coe and Helpman and later expanded by Keller in the 1990s (in papers the authors cite). The innovation in this paper is to separate trade-weighted foreign R&D into two components, one for developed countries and one for developing countries. Since there is no R&D data for most developing countries, they authors impute R&D stocks in these countries, based on their trade-weighted access to R&D in developed countries. The sample is 24 developing countries and 16 industries over the period 1976-1998.

The main findings are that TFP is positively correlated with both developed and developing country R&D, with the effects of developed country R&D being larger. The authors interpret the results to mean that R&D by one country spills over onto the level of technology in its trading partners.

Evaluation

The paper is up to date with regards to the literature. The empirical analysis, while not innovative, is competently executed. The paper is derivative of previous work, but does make a worthwhile contribution to the literature.

The paper asks whether TFP is higher in countries that trade more with high R&D countries or that trade more with countries that themselves trade more with high R&D countries. The answer to both questions appears to be yes. The authors accept the conventional explanation for these results, that they represent spillovers. I would have expected the authors to be more cautious in interpreting the results and to be more willing

to investigate other explanations for the patterns they find in the data (since the papers from which this paper is derived are now rather old and have been subject to critiques in the literature).

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Clarity of the project focus and stated objectives		X			
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Empirical application			X		
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Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence			X		
Appropriateness of the recommendations			X		
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research			X		

Description

This volume examines why economic integration among Arab countries has not progressed. I will give a brief review and evaluation of each chapter and then an overall evaluation of the volume.

The opening chapter by Fawzy summarizes myriad attempts at Arab economic integration over the last several decades. Fawzy documents the limited extent of trade and capital flows between Arab countries, but also notes that at least among some countries migration flows have been substantial. The author argues that the incentive for Arab economic integration is weak, given that production structures in many of the region's countries are similar. Also, regional institutions have provided a weak political foundation to support integration. The discussion is accessible and the analysis is solid. The chapter is a useful guide to policy makers for why Arab economic integration has not progressed further. My one complaint is that Fawzy doesn't explore more fully the possibility of migration as a means for regional integration.

Galal and Fawzy review the economic performance of Egypt. Incentives firms face appear to favor production for the domestic market, which may account for the fact that exports as a share of GDP in Egypt have been flat for some time. To make this point more clearly, the authors calculate the return on equity and the return on assets for a typical exporter and a typical firm producing for the domestic market under different scenarios (based on statutory taxes facing firms in the two sectors). Returns appear to be much higher for domestic producers. However, it is hard to know what to make of this result. Few details are given about the estimation. The analysis is strictly partial equilibrium. If returns on equity are so low for exporters, why do any firms export?

Statutory tax rates and average tax rates might differ substantially, if firms bribe their way out of duties. The authors document no barriers that would prevent firms from switching out of apparently less profitable export activities. Nor do they consider a more sophisticated general equilibrium argument in which disincentives to export induce firms to leave the activity until returns between exporters and domestic producers are equalized. The paper consists mainly of back of the envelope calculations.

Zarrouk estimates non-tariff barriers for eight Arab countries. They appear to be large, which the author uses to argue that a Greater Arab Free Trade Area (to the extent that it concentrates on tariffs) would have limited effect. The analysis is based on a survey of 30-40 exporters in each of eight Arab countries (for a total sample size of 230) that asks about transaction costs governing international trade and the business environment in particular countries. Based on the results, Zarrouk calculates the average equivalent tax payment as a share of imports, the number of documents needed to clear goods through customs, and whether customs and tax dealings are better or worse than three years ago. The results are presented through a series of summary statistics. The analysis is informative but not very deep. The paper contains a series of partial correlations without much of an attempt to link the results together to tell a more compelling story. Also, the levels of trade barriers that the author estimates are hard to interpret, since we do not have comparable data from other developing countries. It seems a shame to go the expense of conducting firm level surveys and then to do so little with them. The end result is an impressionistic account of non-tariff barriers.

Konan uses a computable general equilibrium model to examine the impact of various reform measures on Egypt and Tunisia. After calibrating the model, the author considers two scenarios (1) shallow integration (removal of tariff and some non-tariff barriers on goods), and (2) deep integration (removal of trade barriers on goods plus

liberalization of services). For either scenario, the author considers preferential liberalization with respect to other Arab countries and unilateral liberalization with respect to all countries. The CGE model is standard and the calibration and counterfactual exercises appear to be competently executed. The results are provocative and should be of great interest to policy makers. For either country, the welfare effects of shallow integration are very small. Shallow, preferential liberalization would lower welfare modestly in Tunisia and have little effect on Egypt. Shallow, unilateral liberalization would raise welfare modestly in Tunisia and again have little effect on Egypt. However, deep integration, whether preferential or unilateral, would have large positive effects on welfare in either country. These results suggest that efforts to liberalize trade in goods among Arab countries would have a low payoff in terms of welfare. Policy makers should instead focus on liberalizing services, where potential welfare gains are considerable. The exposition is clear and the results are presented in a rigorous but accessible manner. This paper offers guidance to policy makers on which sorts of liberalization strategies would yield maximum potential benefit.

Hoekman and Messerlin compare the potential for Arab integration today with Europe in the 1950s and 1960s. The chapter begins by summarizing European constitutions, history of trade policy, national sectoral policies, and domestic regulations. Relative to Europe, Arab countries have small product markets and limited intra-industry trade, making the incentives for integration in the Arab world small. The authors discuss how a coalition to support Arab economic integration might be formed. They suggest that an integration strategy based on services would be a more attractive alternative to one based purely on trade liberalization, since gains from regional trade in goods appear to be limited. The authors come close to arguing that what matters is not so much regional economic integration among Arab countries but liberalization of regulations on

domestic industries. The analysis is sophisticated and yields a surprisingly meaningful comparison of European and Arab experiences in terms of integration. This chapter is a nice complement to the one by Konan. It should be a helpful guide to policy makers thinking about the basis for regional integration.

The final chapter by Winters identifies the key institutional features that made the European Union a success. These are a separation of powers, the ability to manage spillovers and enlargement, the capacity to make internal transfers across European countries, and the ability to maintain the motivation for integration. Winters argues provocatively that European integration is not driven by economic gains but is a political-ideological phenomenon. The implication is that in the absence of similar institutions and regional political motivations the potential for Arab integration is limited. The chapter by Winters is complementary to that by Hoekman and Messerlin. However, in such a short book it seems a shame to have two chapters on Europe and no chapters on regional integration efforts (whether successful or not) in Africa, Asia or Latin America.

Evaluation

The volume offers several useful chapters on Arab integration but quality is inconsistent. The opening Fawzy chapter and the closing Hoekman and Messerlin and Winters chapters are strong and provide excellent comparative context for considering the potential for Arab integration. The Konan chapter provides a helpful analysis of the potential welfare gains of different types of liberalization strategies for Egypt and Tunisia. However, the Galal and Fawzy and Zarrouk chapters are weak and lack clear policy implications. Also, the collection of chapters is unbalanced. With three contextual chapters and only one serious policy-estimation chapter, the volume is long on

narrative but short on quantitative results. My guess is the unevenness of the chapters will limit the book's impact.

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S	Superior
AA	Above Average
A	Average
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U	Unacceptable

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<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed		X			
Clarity of the project focus and stated objectives			X		
Analysis					
Theoretical/conceptual framework			X		
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources			X		
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling			X		
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research			X		

Description

The chapters in this volume consider issues related to trade liberalization in Arab countries. I will give a brief review and evaluation of each chapter and then an overall evaluation of the volume.

Yeats and Ng summarize exports by Middle Eastern countries. They document the region's trading partners, composition of exports, fast growing export sectors, and extent of intra-industry trade. They also decompose export growth (into components they mysteriously term demand factors and competition factors) and calculate revealed comparative advantage. The chapter provides a dense overview of Middle Eastern trade patterns. While the authors have clearly done a great deal of work, they present too many results for the reader to digest the material. The long series of exercises lack an accompanying narrative that explains trade developments in the region. One is left with the impression that there is a great deal of heterogeneity in Arab trade that defies generalization, other than to say some countries are resource abundant and other countries are labor abundant. I'm afraid policy makers might not know what to take away from the analysis.

The chapter by De Rose examines agriculture in the Middle East and North Africa. The author summarizes production and trade patterns (with a great many tables), calculates revealed comparative advantage in agriculture (it appears the region has a comparative disadvantage in agriculture), and examines policy bias against agriculture (the region has high barriers on both manufacturing and agriculture, making it unclear whether there is a bias against agriculture). De Rosa concludes by advocating expanding agricultural trade in the Middle East and North Africa, but the reasoning for this conclusion is unclear. The chapter lacks an analytical focus. There are a great many

summary statistics but no clear message, other than the Middle East and North Africa not being terribly efficient in agriculture. This is hardly surprising given the region's climate and geography. The combination of many tables but little synthesis makes the end result disappointing.

Havrylyshyn and Kunzel examine intra-industry trade between Arab countries. They show that intra-industry trade for countries in the region is low relative to the EU, APEC countries, and NAFTA countries, but not relative to Turkey or the Andean region. They authors take this result to imply Arab countries demonstrate a lack of industrial development. It is hardly surprising that Arab countries, given their abundance of natural resources, are not industrialized or engaged in much industrial trade. Stating this result in terms of intra-industry trade gives a sophisticated sheen to features of Arab development that are very well known. The main analytical exercise is to regress intra-industry trade by country on GDP, per capita GDP, industrialization, the trade balance, regional dummy variables, and other countries. Not surprisingly, the dummy for Arab countries is strongly negative, confirming that countries in the region engage in little intra-industry trade. Unfortunately, the regression exercise lacks a meaningful interpretation. The academic literature has long since abandoned such reduced-form regressions of intra-industry trade as a means of understanding national trade patterns. In the end the chapter does not have much to say except that Arab countries aren't very industrialized.

Martin examines whether Lebanon would gain from preferential trade liberalization with respect to the EU. The chapter provides a simple review of theory, Lebanon's geographic and industry trade patterns, and trade barriers in Lebanon (with respect to different regions) and in the EU (with respect to Lebanon). The author then uses a simple general equilibrium model (that falls short of being a multisectoral CGE model, due to a lack of data on input-output relationships in Lebanon) to examine how

preferential trade liberalization would affect the region. The results indicate that Lebanon would experience substantial trade diversion as a result of preferential trade liberalization, and the chapter supports this finding with a discussion of theory and evidence on real exchange rate movements in the country. The chapter concludes by examining the robustness of the results and whether Lebanon's war reconstruction efforts have contributed to Dutch Disease, which would account for the country's apparent current disadvantage in agriculture and manufacturing. This is a simple, clear, and analytically solid chapter. Data constraints prevent sophisticated modeling but Martin takes the reader through his reasoning carefully. The discussion is thoughtful and accessible. It represents a nice application of economic reasoning in a challenging data environment.

Rutherford, Rutstrom, and Tarr use a multisectoral CGE model to examine the impact of trade liberalization with the EU on a hypothetical small open economy (that also trades with the rest of the world). They employ a standard setup, with CES preferences, constant returns to scale and perfect competition. Given a lack of data, the authors assume values for input-output relationships that mimic an economy relatively specialized in tourism and resource intensive industries. They consider many different liberalization scenarios, varying in the degree and the regional bias of trade liberalization. The interesting and believable finding is that only deep integration (preferential trade liberalization coupled with liberalization of NTBs and harmonization of standards) or liberalization with the EU coupled with considerable multilateral liberalization (with respect to the rest of the world) would yield much in the way of welfare gains for the SOE. Simple preferential tariff liberalization with respect to the EU would have minimal welfare effects. The analysis is clear, the paper uses modern techniques and the discussion is careful (although the paper presents too many results). While the analytical

point the authors make is well supported by theory, one wonders how relevant it is to Arab countries, given the absence of data on which to base the calibration of the model.

Hoekman and Zarrouk examine possible strategies for economic liberalization in Egypt with respect to the EU. They document that Egypt's trade is geographically diversified and that the country imposes extensive NTBs and administrative burdens on domestic industry. Hence, simple tariff liberalization with respect to the EU would be expected to yield little in the way of welfare changes (because it would eliminate relatively few distortions and address barriers toward just one of Egypt's trading partners). They confirm this intuition with a well-executed computer general equilibrium trade model for Egypt, calibrated to match Egypt's pattern of industrial production, regional trade, and policy distortions. A free trade area with the EU (that involves tariff liberalization only) would yield small changes in welfare for Egypt. Liberalization of services raises welfare by more, but still not as much as one would expect given that services appear to compliment domestic production and imports more than they do exports. These are tentative conclusions, since the data for the calibration are poor. However, this is a thoughtful study that delivers useful insights for policy makers considering different types of liberalization strategies.

Cassing, Fawzy, Gallagher, and Kheir-El-Din examine impediments to a globalization strategy in Egypt. Egypt has high tariff levels (with nominal rates of protection tightly correlated with effective rates of protection) and high variability in tariffs, which yields a strong bias against exports. There are also important non-tariff barriers, including distortions in maritime transport services and in the product standardization system. Revealed comparative advantage calculations suggest Egypt is strong in food and textiles. The authors examine institutional constraints on export growth, in the form of taxes, labor supplies, input supplies, and other factors. Finally,

they provide recommendations for reform of tariffs, taxes, and NTBs. This is a well-organized and well-argued chapter that is based on sound analytical reasoning. The analysis is simple but careful. The chapter should be quite useful to policy makers for gauging the consequences of tariff and other distortions for exports.

Zarrouk examines the tariff impact of regulatory regimes. The author observes that harmonization of standards across countries lowers effective trade barriers. For the Middle East and North Africa region, the chapter summarizes product standards, certification, and testing; health and safety regulations; customs and port regulations; and transport regulations. The author has conducted a survey of 50 firms in each of five countries on the importance of customs, port quality, and freight costs for importing and exporting. The survey results are qualitative and hard to interpret, making one wonder whether the considerable expense of the survey is justified. The author also considers the manner in which regulations on services creates barriers to entry. The chapter concludes with policy options on the harmonization of product standards, the monitoring of product quality, and the transport of goods. The chapter deals with important material but given the impressionistic nature of much of the analysis (necessitated by a lack of data), it is hard to know whether the characterization of trade barriers is accurate. The chapter would have benefited from a clearer analytical framework at the outset. As it stands, it gives a long list of market distortions, without a clear sense of how they collectively affect general equilibrium outcomes.

Maskus examines intellectual property rights in Lebanon. The chapter summarizes the enforcement of intellectual property rights in the country and their application by Lebanese firms based on a survey of 117 establishments. The use of patents is limited, trademarks appear to be more important than patents to domestic firms, and copyrights are widely violated. Results are given in impressionistic form. No

summary statistics on these outcomes are presented. The chapter also uses a simple partial equilibrium model to examine the consequences of greater protection of property rights for industries calibrated to resemble Lebanese pharmaceuticals, software, or printing, publishing, music, and film (either in static or dynamic settings). The analysis is logically consistent, but the results are hard to assess given the lack of data on Lebanese establishments. The chapter usefully traces out the channels through which IPR protection affects firm behavior. Greater IPR protection would enhance FDI, local product development, and joint ventures. The chapter is somewhat scattered and could be better organized. The conclusions on the effects of IPR protection are credible. However, there is little discussion of why IPRs are not more consistently enforced.

Zarrouk examines issues surrounding a free trade agreement involving the Middle East and North Africa. The chapter gives a history of integration initiatives in the region, which is not encouraging given the limited progress of past decades. The author considers current provisions under discussion for a Greater Arab Free Trade Area, which would entail across the board tariff reduction and efforts to push forward on reducing NTBs. There is emphasis that deep integration (in the form of liberalization of services) would be needed to yield significant welfare gains to the region. The conclusion is moderately sanguine about the potential benefits of a GAFTA. Given the other analyses in the volume, the chapter closes with perhaps insufficient emphasis that a GAFTA alone may be welfare reducing. The other chapters emphasize strongly that tariff barriers are a small part of the distortions holding the region back and that opportunities for intra-regional trade are limited. Thus, this chapter appears less gloomy about the benefits of a GAFTA than other chapters suggest it should be.

Hoekman and Ray examine the participation of Middle East and North Africa in the WTO, noting that membership by countries in the region is limited. They outline

basic WTO rules and regulations, show what changes countries in the region would need to undertake to be WTO eligible and to benefit from membership, and discuss the potential welfare effects of WTO ascension. The chapter concludes with a useful practical discussion of the administrative and bureaucratic steps a country would need to take in order to join the WTO. Overall, the chapter provides a clear and concise guide for countries in the region considering WTO membership. I would expect that policy makers would find it a valuable contribution.

Evaluation

Overall, the contribution of the volume's chapters is mixed. There is considerable variation in the quality of the chapters and, if the intent of the volume is to provide a guide to policy makers, there is simply too much material. The volume would have benefited from considerable pruning. The book contains a combination of chapters that engage in modeling exercises, summarize the policy environment in Arab countries, or give advice to policy makers about strategies to enact liberalization. This gives the volume balance but makes it a bit unwieldy. More substantially, the modeling exercises all rely on calibration exercises of some sort. There is virtually no econometric evidence incorporated into the analysis. Of course, data constraints complicate the use of econometrics. However, several of the chapters make use of surveys, which were presumably conducted at Bank expense. The surveys are primarily used to give impressionistic accounts of the policy environment in specific countries. It seems a shame to go the time and expense to collect survey data and then do little more than present a few summary statistics. There would seem to be scope for better coordination of data collection and data analysis. Finally, there is considerable overlap between this volume and another volume I reviewed, *Arab Economic Integration*. Some of the chapters in the two volumes were by the same authors, in some cases discussing very

similar research projects. It seems there would have been scope for condensing the two volumes into one or to differentiating the output more noticeably.

Annex 3: Research Quality Indicator Form

S	Superior
AA	Above Average
A	Average
BA	Below Average
U	Unacceptable

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed		X			
Clarity of the project focus and stated objectives			X		
Analysis					
Theoretical/conceptual framework			X		
Empirical application			X		
Statistical and econometric methods				X	
Use of existing knowledge and resources			X		
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling				X	
Output Quality					
Writing quality (clarity, organization, etc.)			X		
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research			X		

Description

This paper calculates the average distance of trade (the trade weighted average distance between trading partners). There are a few stable patterns about average distance in the data. Average distance is higher for poorer countries. Over time, it rises for some countries and falls for others (OECD countries), with minor changes in the average distance of trade at the global level.

The paper has a brief theoretical discussion of the determinants of average distance, but the welfare implications of average distance are unclear.

In a final section, the paper examines the correlation between average distance and whether a country belongs to regional trade associations, has exchange-rate changes, and the price of oil. The results have no clear interpretation.

Evaluation

This paper has no analytical point. There is no convincing motivation for why we should care about the average distance of trade or whether it matters for national welfare or any issue related to development policy. The paper contradicts itself by opening with a discussion of how the effect of distance on trade in gravity models has been rising over time and then closing with the statement that the paper's results contradict predictions regarding the death of distance in economic life. There is abundant evidence (including papers that the authors cite) that distance continues to matter for economic activity. This paper adds little to the literature.

Beyond the lack of motivation, the paper engages in bizarre data exercises, focusing on what the authors arbitrarily declare to be “economically significant” changes in average distance. I found the empirical results devoid of meaning.

Annex 3: Research Quality Indicator Form

S	Superior
AA	Above Average
A	Average
BA	Below Average
U	Unacceptable

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed				X	
Clarity of the project focus and stated objectives					X
Analysis					
Theoretical/conceptual framework				X	
Empirical application					X
Statistical and econometric methods				X	
Use of existing knowledge and resources				X	
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling			X		
Output Quality					
Writing quality (clarity, organization, etc.)			X		
Clarity of conclusions and recommendations					X
Extent to which conclusions are based on analytic evidence					X
Appropriateness of the recommendations					X
Appropriateness of output form (working paper, book, database, etc.) for intended audiences			X		
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues					X
Provides a sound basis for policy					X
Actual or likely impact of research on:					
Government policy					X
Future analysis					X
The development community in general					X
Overall Quality of Research					X

Description

WITS stands for the World Integrated Trading System. It is a software package that allows users to access the Comtrade database from the UN Statistical Division, the TRAINS database from UNCTAD, and the IDB and CTA databases from the WTO. Comtrade and TRAINS are the main sources of current data on bilateral trade flows and trade barriers at a disaggregated product level. Each source is enormously important for empirical research on international trade. For users that have paid for access (or have been granted access) to the three data sources, WITS provides software that is intended to make it easy to download data.

Evaluation

Disaggregated data on bilateral trade flows are a fundamental input for empirical research on international trade. If we do not know how much countries trade, at what prices they trade, or what barriers impede trade, research on international trade cannot progress. In my view, the contribution of WITS to this effort is mixed. I had repeated problems in downloading and installing WITS software. My technical skills are not great when it comes to software management, but my guess is that if I have problems then so will many other researchers. I attempted to download WITS both on my desktop computer in my office and my laptop computer at home. In each case, the download failed on three successive attempts. A librarian at UCSD was more successful. He was able to get WITS working on his PC. Still, it appears that WITS is not as user friendly as it should be.

Of greater importance is the fact that WITS does not provide free access to the data it is meant to complement. The World Bank is missing an opportunity to help improve the quality of research in international economics by not doing all it can to make Comtrade and TRAINS available free of charge to the scholarly research community. These data represent a public research good of extremely high value. That it costs \$3750 to obtain a yearly subscription to Comtrade means that researchers in many universities lack access to the data (my own university has not purchased a subscription). My sense is that the return to the Bank from making access to trade data free would exceed its costs. The increase in research output would yield results that would be tremendously useful in helping guide development policy.

Of course, Comtrade and TRAINS may be important revenue sources for the UN. But a simple solution would be to provide researchers free access to data beginning two or three years in the past, going backward. My guess is that the users with the highest willingness to pay for Comtrade and TRAINS are those that care about current trade flows, not historical ones. Scholarly researchers, in contrast, care about having a sufficiently long time series to conduct meaningful empirical analysis. Missing a few recent years would be a small price to pay for free access to these very valuable data sources.

Annex 3: Research Quality Indicator Form

S	Superior
AA	Above Average
A	Average
BA	Below Average
U	Unacceptable

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives			X		
Analysis					
Theoretical/conceptual framework					
Empirical application					
Statistical and econometric methods					
Use of existing knowledge and resources					
Data					
Awareness of other data sources		X			
Data compilation, cleaning and cataloging			X		
Survey design and sampling					
Output Quality					
Writing quality (clarity, organization, etc.)					
Clarity of conclusions and recommendations					
Extent to which conclusions are based on analytic evidence					
Appropriateness of the recommendations					
Appropriateness of output form (working paper, book, database, etc.) for intended audiences					
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research			X		

Description

This project examines the choice by countries of whether to join a trade bloc. The authors begin by noting that successful blocs appear to go beyond simply reducing tariffs and quotas. They involve deeper integration on issues involving trade in services, foreign investment, labor flows and currency management. Today, most blocs are not protected by high external tariffs, as in the past. Another distinguishing feature is that blocs often include both high and low-income countries.

The heart of the manuscript has three parts. First, the authors examine the political arguments for joining a trade bloc, including whether blocs enhance national or regional security, allow countries to achieve greater bargaining power in multilateral settings, or lock in domestic reforms. The justification for trade blocs on political grounds appears to be mixed, as the benefits of blocs in terms of international relations or domestic politics are not uniform across countries. Second, the authors examine economic arguments for blocs associated with positive scale and competition effects and the potential for these effects to be muted or reversed by trade diversion. The authors make the valuable point that the economic benefits to trade blocs are not guaranteed. The policy details surrounding the implementation of blocs matter greatly for whether they will yield the hoped for gains. Third, the authors consider the policy choices associated with joining a bloc, in terms of with whom to form a bloc, what policies to adopt toward the rest of the world, and how deep to make integration. They illustrate how choices along these dimensions affect the size and sign of the impact of a trade bloc on national welfare. The authors conclude with a discussion of regional versus multilateral trade initiatives as alternative strategies for international economic integration.

Evaluation

This document is intended for policy makers in developing countries who are trying to evaluate whether joining a trade bloc makes sense for their nations. The analytical material presented is up to date and accessible. The writing style mixes informal theoretical models with detailed examples and short case studies. The discussion is thorough and while it succeeds in being analytically sophisticated it remains grounded in specific contexts. The authors do an excellent job of driving home the point that there are many choices involved in designing a trade bloc and that the success of a bloc depends crucially on how regional integration is implemented. My sense is that this document will be quite useful for policy makers.

Annex 3: Research Quality Indicator Form

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework	X				
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling			X		
Output Quality					
Writing quality (clarity, organization, etc.)	X				
Clarity of conclusions and recommendations	X				
Extent to which conclusions are based on analytic evidence	X				
Appropriateness of the recommendations	X				
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues	X				
Provides a sound basis for policy	X				
Actual or likely impact of research on:					
Government policy	X				
Future analysis		X			
The development community in general		X			
Overall Quality of Research	X				

Evaluation of Individual World Bank Research Projects

Nina Pavcnik

#33: "WTO and Developing Countries," by Hoekman/Martin/Tarr

A. Objectives

This project has a very broad scope in terms of country and topic coverage. The underlying theme is integration of developing nations into a multilateral trading system. The paper by Hertel et al. studies the welfare and poverty impacts of multilateral trade liberalization in Indonesia. Another more policy-oriented paper by Finger and Schuler examines the costs and challenges faced by developing countries in implementing WTO regulatory agreements on intellectual property rights (IPR), customs valuation, standards etc, and whether these reforms appropriately identify the main problems poor countries face in each respective area. Finally, the study by Ozden and Reinhardt analyzes whether non-reciprocal trade preferences granted to poor countries through the GSP system affect those nations' domestic trade policies.

These papers contribute to several policy debates. For example, support for multilateral trade reforms will, in part, depend on who benefits and who loses from the reforms. Simultaneously, debate continues over the rules that govern global trade, to what extent these rules should be chosen domestically or multilaterally, and the extent to which developing countries should be differentially treated within the WTO system.

That said, the overall project lacks cohesion and there is some overlap in research topics with another project I reviewed, "Global Trade Architecture."

B. Design and Implementation

The methodologies used vary across the studies. In general, these methodologies were appropriate and fairly well executed. Also, the authors are well aware of the existing work in each area, and are familiar with the specifics of existing institutions and policies.

For example, the policy-oriented piece by Finger and Schuler relies on a simple cost-benefit analysis of implementation of WTO regulatory reforms in poor countries. The study is simple, yet makes a persuasive argument that the cost might at times outweigh the benefits, because the WTO agreements on customs and IPR do not address or remedy the main problems faced by developing countries in the respective areas.

Hertel et al. use a CGE model to simulate the effects of multilateral trade reform on poverty in Indonesia, through consumption and earnings channels. Given the data constraints, this approach seems appropriate. One innovation of their approach (relative to existing CGE work) is that they use household survey data to incorporate heterogeneity of households into a standard CGE model, which improves the usefulness

of the model in evaluating the poverty effects of trade reform. Most existing CGE work relies on a representative household. The study also acknowledges and addresses the inconsistencies between input-output data taken from national accounts and data from household surveys. Unfortunately, the study provides little information on the parameters underlying the analysis and should include more robustness checks in that regard. Nonetheless, the study is very clear on the exact channels through which multilateral trade reform affects poverty in the simulation.

The study by Ozler and Reinhart is a relatively well-executed empirical exercise. The authors combined standard cross-country data from the World Development Indicators database with information from USTR documents on a nation's eligibility for U.S. GSP preferences, which seem reliable. The authors regress a country's average import duty on an indicator for U.S. GSP program eligibility and the usual controls in cross-country regressions. It was surprising that the authors did not include a full set of year dummies in their regressions, to control for correlation between unobserved macro shocks, GSP status, and domestic trade policy. That said, the authors acknowledge the endogeneity of GSP eligibility, and propose several instruments (for example, U.S. GDP growth, existence of a formal alliance with the United States, etc.) to account for this. This IV strategy is not fully convincing, and I would have been more cautious with the interpretation of the results. For example, countries that form formal alliances with the United States might also independently practice more liberal trade policy. Similarly, the U.S. could withdraw a country's GSP status during a global recession, while a poorer nation could independently increase its own trade restrictions at that time. That said, their instruments "pass" the weak instrument test and the overidentification test. Overall, the authors were aware of the limitations of their data and exposed their results to numerous robustness checks. In sum, while I am not fully convinced by the identification strategy, this study makes a good contribution and is, to my knowledge, the best study on this topic, meriting publication in a top field journal.

C. Accessibility

The studies are generally well written, and the material is well targeted toward the intended audience. The Finger and Schuler piece was published in a policy-oriented journal (*World Economy*), while the more technical studies have appeared or are forthcoming in *World Bank Economic Review* (Hertel et. al.) and *Journal of Development Economics* (Ozler and Reinhardt).

D. Results

The project on the welfare and poverty effects of multilateral trade reform concludes that it is important to evaluate the poverty effects of trade reform on a case by case basis, keeping in mind the poverty profile of a country, the specific trade reform in question, and the exposure of households to relative price changes through consumption and earnings in both the short and medium run. For example, in Indonesia, while multilateral liberalization is predicted to reduce national poverty, poverty might actually increase in

the short run among households that rely on self-employed agriculture, since agricultural profits do not rise as much as consumer prices.

Other studies contribute to the debate on the differential treatment of developing countries within the WTO system by improving our understanding of tradeoffs faced by developing nations. For example, the study by Finger and Schuler shows that the costs of implementing regulatory WTO agreements (IPR, custom valuation) at times exceed these countries' annual development budgets, and that further, these WTO agreements fail to appropriately identify and remedy the main problems faced by the developing countries in each area of reform. Ozler and Reinhardt show that differential preferential treatment of poor countries in trade areas might have unintended negative side effects. They find that countries eligible for non-reciprocal trade preferences through the GSP have, on average, higher trade protection in the domestic market. One interpretation of this negative association is that unilateral trade preferences, by reducing incentives for exporters to lobby in favor domestic trade reform, increase the likelihood of continuing protection in the domestic market for the import sector.

Overall, this project has potential to influence future research in this line of work. In addition, the data on eligibility of poor countries for U.S. GSP should be made publicly available and posted on the World Bank website.

Annex 3: Research Quality Indicator Form for "WTO and Developing Countries"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework			X		
Empirical application		X			
Statistical and econometric methods		X			
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources		X			
Data compilation, cleaning and cataloging		X			
Survey design and sampling		N.A.			
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy		X			
Actual or likely impact of research on:					
Government policy		X			
Future analysis		X			
The development community in general			X		
Overall Quality of Research		X			

Project #163: "Informal Export Barriers and Poverty," by Porto

A. Objectives

This project evaluates the *potential* impact of informal export barriers to trade on poverty in Moldova. This is an important policy topic; while many developing and post-socialist countries have recently substantially reduced formal barriers to trade, informal barriers to trade (ranging from bribes, cumbersome custom practices, domestic regulation, to transportation costs) continue to inhibit international trade. Despite the significance of such barriers, we know very little about the extent to which they affect household welfare and poverty in poor countries.

B. Design and Implementation

The study simulates the effect of informal barriers to export on household welfare based on a theoretical framework that incorporates an agricultural household model into a general equilibrium trade model. The author developed this method in his previous work, and appropriately modifies the method to reflect the specific production structure of the Moldovan economy.

Simulations of this type are appropriate in a setting where one does not observe an actual policy shift in the data. The author is well aware of related literature on distributional effects of formal barriers to trade, and his method offers some advantages over the usual CGE work. For example, one can quantify the relative importance of channels through which informal export barriers to trade could affect the real income of households (via changes in the relative price of an exported good), namely, wages, agricultural income, and consumption. The study allows for heterogeneity of household exposure to trade shock through earnings and consumption. Additionally, key parameters of the model are estimated based on existing data from nationally representative household surveys (i.e. repeated cross-sections from the Moldovan Household Budget Survey). The data seem reliable and appropriately used. The conclusions are consistent with the simulation results and the author acknowledges the limitations of his approach. For example, strong assumptions needed for identification of parameters are spelled out and the results are subjected to robustness analysis.

However, additional future work is needed in two areas. First, the above framework does not provide *empirical estimates* of the extent to which households/firms *adjust* their production/export decisions and consumption in response to changes in informal barriers to exports. Inclusion of micro data that follows a policy reform seems crucial to fully understand the responses to reform. This is, of course, a challenging task in the current case given that informal barriers to trade are very difficult both to detect and quantify. Second, the current study models informal barriers to trade as an ad-valorem export tax. Yet, some informal barriers might affect a firm's decision to export by raising the fixed cost of exporting, or by increasing the uncertainty about profits through the more arbitrary fashion in which these barriers are imposed on firms. These considerations might lower the incentive to participate in export markets in a different manner than is usually caused by an ad-valorem export tax.

C. Accessibility

The project was published as an academic article in the *Journal of International Economics*. The presentation of the material is well targeted toward the aimed audience, namely, academics interested in poverty and trade.

D. Results

The simulation results suggest that reduction in informal barriers to exporting could, in principle, yield some poverty reductions in rural Moldova. This is because the gains in agricultural income due to higher relative prices of agricultural products exceed the consumption losses for farm households, which are mainly located at the bottom tail of welfare distribution.

Overall, this paper provides a first step in addressing an important topic. However, I imagine that future work will rely on econometric methods rather than the framework developed in this project to continue this line of investigation.

Project: Informal Export Barriers and Poverty by Porto, G.

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework			X		
Empirical application		X			
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources		X			
Data compilation, cleaning and cataloging		X			
Survey design and sampling		X			
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence	X				
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research		X			

Project #29: "Intellectual Property Rights," by Lele

A. Objectives

This policy-oriented project first attempts to identify the main challenges that participants in agricultural research (i.e. international and national research centers, industry) face in regards to agriculture related intellectual property rights (IPR). It then discusses how the World Bank could assist its member countries through research and operations work in this area. The project was undertaken in response to requests by several international and national agricultural research institutes to develop the Bank's research and operational role in agriculture-related IPR. The mission of these institutions is in part to secure access to new technology for farmers in developing countries. They are increasingly affected by the growing dominance of privately-funded agricultural research and the adoption of the TRIPS agreement, yet have little experience with IPR.

B. Design and Implementation and Results

The report consists of several narrative chapters, written by practitioners from the World Bank, international agricultural research institutions, industry representatives, and national universities. All chapters reflect a good understanding of the countries in question, and the authors are familiar with problems national or international organizations face in implementing IPR.

The introductory chapter "IPR, Agriculture, and the World Bank" sets the stage for the remainder of the report. The chapter argues for a unique position of agriculture related IPR because the sector has historically relied on publicly funded research to provide poor farmers access to new technology. The chapter also reviews the economics literature on the impact of IPR on economic measures such as growth, investment and prices. This review could have been better organized to reflect important distinctions in how IPR might affect the welfare (or growth) of a country in a single country setting or in a multi-country setting, where implications of IPR for developing countries become much more complex. In addition, the report could have done a better job describing tradeoffs between short-term effects of IPR on prices and quantity, versus more dynamic effects on R&D investment in the long run. That said, the chapter correctly argues that convincing empirical evidence on these issues is still lacking (especially in 1999 when the chapter was written). The chapter concludes with practical suggestions for policy makers and practitioners in research institutes of ways to strengthen enforcement of agriculture-related IPR in developing countries.

The next three chapters examine issues surrounding IPR in agriculture through the lens of international agricultural research centers, industry, and national research centers and universities. They provide case studies of the challenges institutes faced in adapting IPR agreements in agriculture. These chapters provide abundance of institutional detail and experience and identify the problems arising in the implementation of IPR. This information will likely be useful for policy purposes.

The final chapter discusses the role the Bank should play in assisting its lenders in regards to agriculture-related IPR. The report concludes that the World Bank should assist its borrower countries in the area of IPR in agriculture by supporting research on

economic consequences of agriculture-related IPR and by helping countries strengthen their IPR systems through better access to legal advice and the training of staff. However, I was not convinced that some of the proposed research goals would contribute to better understanding of IPR issues in agriculture. For example, the report calls for the creation of a country index of IPR rights (similar to the one by Ginarte and Park 1997) that the World Bank could use to monitor progress in implementation of IPR across countries over time. These kinds of indices are notoriously difficult to interpret, so I am not sure we can learn much from them. Instead, the World Bank's money would be better spent by focusing on empirical studies of the effects of a particular policy change in IPR on outcomes of interest (i.e. investment, technology transfers, prices, farmers' access to new technology, etc.).

Overall, this is a useful report for policy makers, in as much as it identifies some of the problems poor countries and public institutes involved in agricultural research face with TRIPS. These issues and problems will vary significantly across countries, depending on their domestic research capacities. Consequently, it was surprising that the report mainly focused on the experience of Brazil and India, but has not addressed the topic from the perspective of the least developed countries. It is not clear how relevant the experiences of India and Brazil are for the least developed economies, given that the latter likely lack national research capacity and are less institutionally ready to implement an IPR reform.

C. Accessibility

The report is very policy oriented and is well targeted to the intended audience (i.e. individuals in agricultural institutes).

D. Results (please see B)

Project: "Intellectual Property Rights," by Lele

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework		X			
Empirical application			X		
Statistical and econometric methods	N.A.				
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources	N.A.				
Data compilation, cleaning and cataloging	N.A.				
Survey design and sampling	N.A.				
Output Quality					
Writing quality (clarity, organization, etc.)			X		
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence			X		
Appropriateness of the recommendations			X		
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy		X			
Future analysis			X		
The development community in general			X		
Overall Quality of Research		X	X		

Project #30: "Intellectual Property," Hoekman

A. Objectives

This project addresses the issues related to intellectual property rights (IPR). The first volume *Intellectual Property and Development* examines, from the perspective of international economics, the impacts of a country's IPR regime in a multi-country setting. The second volume, *Poor People's Knowledge*, brings an array of other perspectives to IPR issues related to protection of traditional knowledge, heritage, and culture in poor countries.

B. Design, Implementation, and Results

The volume *Intellectual Property and Development* is organized into three parts. It examines how a country's IPR regime affects the flows of trade, FDI and licensing; it discusses intellectual property exhaustion and parallel trade; and examines the implications of IPR reform for market structure and pricing. These are key aspects of IPR debate in an open economy setting.

For example, several chapters empirically examine whether a country's IPR regime affects technology inflows through trade flows (Fink and Braga), FDI (a chapter by Fink, and a chapter by Smarzynska), and licensing (Yang and Maskus). The authors use standard empirical methodology, although concerns remain in most chapters about its exact implementation. One problem is that most studies (Yang and Maskus are an exception) base their analysis on cross-sectional data rather than panel data that span a period of IPR change, so that the endogeneity of a country's IPR regime is very difficult to address. For example, Fink and Braga examine the relationship between IPR and trade in cross-sectional data on bilateral trade flows across countries with a gravity model. They regress the log of bilateral trade flows on a country-level measure of IPR (and other controls), but do not include (and cannot include) a country-fixed effect. Consequently, this methodology might yield biased estimates. Similar criticism applies to the chapter by Fink (chapter 4). The work by Yang and Maskus and Smarzynska Javorcik is less prone to this criticism, although the concerns about exact interpretation of results remain.

That said, all of the above chapters are very careful in noting data limitations and are cautious in their interpretation of results. For example, all papers discuss the shortcomings associated with the use of a country-level aggregate IPR index. What one takes away from the empirical set of papers is that the relationship between IPR and flows of trade, FDI, and licensing is very sensitive to the exact empirical specification in aggregated cross-country data, and that there is a need for future work to focus on estimation of the effects of actual IPR policy change with detailed firm level data (as the book itself concludes). Interestingly, the one study that uses firm-level analysis (Smarzynska Javorcik) finds a negative association between weak IPR regime and a firm's decision to conduct FDI, and shows that weak IPR is also associated with increased likelihood that a firm will invest in distribution facilities (rather than production) in that location.

Another set of chapters deal with how IPR affect innovation and market structure. These studies rely on simulations to examine the effects of an introduction of patent protection on the pharmaceutical market in India (Fink), and the impact of IPR in Lebanon (Maskus). I found the chapter by Fink especially well argued and laid out. The author first presents a model of supply and demand for pharmaceuticals in India. One nice feature of the model is a two-tiered demand system, which allows for imperfect substitutability across products with different active ingredients and for imperfect substitutability between products within an active ingredient group. The supply side of the model takes into account multi-product firms. The model is then calibrated to data on the Indian pharmaceutical industry. Simulations suggest that the effects of introduction of patent protection will depend on the magnitude of elasticity of substitution between active ingredients and across brands with the same active ingredient. Unfortunately, the simulation analysis would have been more informative had it relied on *empirical* estimates of key parameters. Similar observation applies to Maskus' study on Lebanon. That said, the authors acknowledge the limitations of their analysis and are very cautious when interpreting their results.

Overall, the studies in the above volume are in general well thought out, informative and fairly well executed. Unfortunately, the volume does not provide much *new* material that advances research on IPR. In fact, a version of all of the papers in this volume has been previously published in a conference volume or an academic journal. The volume does, however, provide useful discussion in the opening and closing chapters of areas that require future work. One wonders whether money could have been saved by simply creating a World Bank website on important contributions to IPR literature. The site would provide links to the published papers included in this volume, and could be continually updated as new studies emerge.

The volume *Poor People's knowledge* offers perspectives on IPR that are less familiar to economists. It is a collection of essays by anthropologists, economists, museum and craft development consultants, lawyers, and policy makers that discuss how IPR could protect traditional knowledge, heritage, and culture in developing countries. It considers a wide range of issues, ranging from handicrafts in India to the Africa Music project to biopiracy concerns. While these are informative, thorough essays, it is not clear how economics could add to this debate as many of the key concepts are difficult to quantify. That said, each case study in the book provides a wealth of detailed information that may provide useful background to policy makers working on IPR issues in these areas.

C. Accessibility

The project is well targeted toward its intended audience. For example, the volume *Intellectual Property and Development* provides a comprehensive review of some of the issues related to IPR in a multi-country setting and is in general well targeted toward the academic and policy-oriented audience. However, parts of several chapters are likely too technical for a more policy-oriented audience (although the most technical material is delegated to appendices).

D. Results (incorporated into B)

Please see B.

Project: "Intellectual Property," by Hoekman

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework		X			
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging		X			
Survey design and sampling		X			
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences			X		
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis		X			
The development community in general			X		
Overall Quality of Research		X	X		

Project # 32: "Agricultural Trade Policy" by Finger/Hoekman/Martin

A. Objectives

International trade in agriculture remains highly distorted by complex trade and domestic policies, and many view the removal of agricultural trade barriers within the Doha WTO round as a key component of poverty reduction in developing countries. This large project endeavors toward better understanding of the costs and benefits of such reform for developing countries. In particular, the project aims to summarize the state of affairs in global agricultural markets, to identify the existing trade and domestic policies distorting global agricultural markets, and to assess the welfare changes associated with the removal of a broad range of trade distortions (ranging from improved market access, export subsidies, domestic support) in developed and developing world nations.

B. Design and Implementation

The project is organized into two book volumes. The book volume edited by Aksoy and Beghin consists of *purely descriptive* studies that focus on global agricultural markets (chapters 2-7) and commodity specific case studies including sugar, dairy, rice, and coffee (chapters 8-16). Unfortunately, these chapters merely present aggregate descriptive facts on agricultural trade, agricultural production, and agricultural policy. No attempt is made to systematically explain whether and how changes in agricultural policy (or some other underlying supply or demand shocks) account for the observed changes in trade flows, or to conduct any other quantitative analysis. For example, chapter 2, "The Evolution of Agricultural Trade Flow," documents changes in the volume and composition of agricultural trade flows during the 1980s and 1990s. Chapter 3, "State of Agricultural Protection," presents and discusses changes in agricultural protection ranging from tariffs to domestic support during the 1980s and 1990s. But no subsequent chapter systematically relates policy changes to trade flow changes. Similar criticism holds for chapters that focus on a particular commodity. Consequently, I do not expect the book to have a significant impact on future research, although it might serve as a useful reference on agricultural policies.

The book volume by Ingco and Winters has greater potential to influence future work and policy. While the methodology is at times simple, the descriptive analysis was often quite informative. For example, "Where the interests of developing countries converge and diverge" by Valdes and McCalla uses simple descriptive analysis of net food importer and net food exporter status of developing countries to discuss the heterogeneity in support for agricultural liberalization among developing countries. In addition, the book contains several studies that quantitatively assess various future liberalization scenarios in agricultural markets, using standard computable general equilibrium models. Chapter 11 by Hertel et al. was particularly well-executed and thorough in its analysis of how multilateral trade reform in agriculture would affect global and regional welfare.

The book has some shortcomings. For example, some other chapters relying on CGE modeling devote very little discussion to the choice of underlying parameters and assumptions, and their results are not subject to robustness analysis. These omissions might simply reflect that the book is geared toward a policy-oriented audience. Yet, it

seems that the numbers should be carefully scrutinized exactly for that reason, and so references to robustness analysis should be included. More importantly, all of the quantitative analyses use a country as a unit of analysis, but do not identify the winners and losers within a country from the suggested reforms. Consequently, the project cannot inform us how agricultural liberalization will affect the distribution of earnings and consumption across heterogeneous households within a country. Finally, given that data on agricultural trade (and in part on agricultural policy) are relatively abundant, I was surprised that the project did not at times approach the topic more empirically.

C. Accessibility

The studies are collected in two edited book volumes. They are presented in a manner appropriate for the intended audience.

D. Results

The Ingco and Winters volume generates several useful findings for policy makers. For example, part 3 of the book provides a quantitative assessment of welfare changes associated with several liberalization scenarios. For example, chapter 11 predicts that a 40 percent cut in agricultural barriers (i.e. tariffs, export subsidies, domestic subsidies) increases annual global welfare by \$70 billion. The main beneficiaries of these gains are taxpayers in developed countries. While developing countries as a whole gain, some regions (namely China and some countries in South Asia and the Middle East/North Africa) are worse off.

Note: Annex 3 includes a separate report on each book because of large differences in quality across the two books.

"Agricultural trade policy – Agriculture and the New Trade Agenda"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework		X			
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling					
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy		X			
Future analysis			X		
The development community in general			X		
Overall Quality of Research		X	X		

"Agricultural trade policy – Global Agricultural Trade and Developing Countries"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives			X		
Analysis					
Theoretical/conceptual framework				X	
Empirical application			X		
Statistical and econometric methods				X	
Use of existing knowledge and resources			X		
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging				X	
Survey design and sampling					
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations			X		
Extent to which conclusions are based on analytic evidence				X	
Appropriateness of the recommendations				X	
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues				X	
Provides a sound basis for policy				X	
Actual or likely impact of research on:					
Government policy				X	
Future analysis				X	
The development community in general				X	
Overall Quality of Research				X	

Project #39: "Regional Trade and Poverty Research" by Goh

A. Objectives

The project develops a methodology to study individual earnings dynamics, using pseudo-panel data created from repeated cross-sections. It then applies this technique to examine whether trade liberalizations during the 1990s exposed workers to greater variability in earnings, employment, and vulnerability to poverty in three Southeast Asian economies (Indonesia, South Korea, Thailand). Understanding the relationship between trade policy reforms and variability of worker earnings and employment provides important information for the design of future trade, labor market, and social safety net policies.

B. Design and Implementation

The topic would be best addressed using nationally representative panel data that tracked individuals through the period of trade reform. Unfortunately, panel data sets are not readily available in most developing countries. The use of pseudo-panels, created from repeated cross-sections, provides a useful alternative, although it limits the scope of the analysis to *employed* individuals and the results might suffer from selection into sectors/employment based on unobservable characteristics of individuals. The project does a fine job of acknowledging the existing research and extending it to cover a new region (East Asia) and adapting an existing methodology to a new area of research (the use of pseudo-panels to look at vulnerability of individuals to poverty due to greater exposure to trade).

The study relies on regressions that use existing, nationally representative, repeated cross-sections of labor force or household surveys, combining this data with industry-level information on the trade exposure of a sector. The idea is to examine whether individuals employed in more trade-oriented sectors experience greater volatility of earnings as the exposure of these sectors to external markets increases. The authors acknowledge the limitations of the data; the lack of a true panel dimension, highly aggregated industry classifications (which complicate the linking of trade data with individual surveys), and lack of available industry trade policy measures (which causes reliance on trade volumes as measures of exposure to reform). Given the topic, the omission of data covering the period of the East Asian crisis, which likely increased earnings and employment variability, was peculiar. That said, among the studies I reviewed, this project was the best at acknowledging its limitations and extremely careful with interpretation of results.

C. Accessibility

The project outputs were well targeted toward the intended audiences. The scholarly article emphasized the technical issues and sensitivity analysis. The output published as a book chapter clearly summarized the findings of underlying research without dwelling on technical issues, while emphasizing how shortcomings of the underlying data could affect the interpretation of results.

D. Results

The authors find little evidence that workers in sectors with increased exposure to trade experienced greater variability of earnings, hours worked, or vulnerability to poverty in Indonesia, Thailand, and South Korea as these countries further globalized during the 1990s (as compared to 1970s and 1980s). However, because 1990s data did not cover the Asian crisis period, conclusions based in the sample data could be dubious. That said, the study shows that variability in earnings and vulnerability to poverty varies far more with the gender and education of individuals than with the external orientation of individuals' sector of employment. The recommendation that remedies to vulnerability to poverty must be sought more in education, rather than in trade policy, is appropriate given the results of the study.

Although this is a competent study, I am not sure it will have a large impact on the direction of future research in this line of work. The best research papers in this area rely on panel data and more direct measures of trade policy, and are thus able to address the question in a more appropriate setting. However, the methodology developed in this paper might prove useful in more policy-oriented research in a setting where no panel data exist.

"Regional Trade and Poverty Research"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework			X		
Empirical application		X			
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources	X				
Data compilation, cleaning and cataloging	X				
Survey design and sampling	X				
Output Quality					
Writing quality (clarity, organization, etc.)	X				
Clarity of conclusions and recommendations	X				
Extent to which conclusions are based on analytic evidence	X				
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy			X		
Future analysis			X		
The development community in general			X		
Overall Quality of Research		X	X		

Project #46: "Global Trade Architecture" by Hoekman

A. Objectives

This is an *ongoing* project on how to effectively integrate developing countries into the WTO. In the past, the global trade system addressed the needs of some less-developed nations by granting them non-reciprocal trade preferences, such as the GSP. One study (Francois et. al.) examines utilization of these preferences by poor countries and, more generally, evaluates the welfare costs of replacing these non-reciprocal trade preferences with multilateral trade policy reductions. In addition, the project includes policy oriented pieces by Hoekman and Prowse that propose more effective methods of integrating developing countries into the WTO that are sensitive to their development goals.

B. Design and Implementation

This project covers a wide range of topics, using a wide range of methodologies. In general, the authors are well aware of the existing research.

Francois et. al. first empirically examine the determinants of a country's utilization of its preferential trading status. They estimate a gravity-like equation in which the log utilization rate (i.e. percentage of country *i*'s imports of product *k* from country *j* that requested preferential treatment) is regressed on the usual gravity regressors and preferential duties for product *k*. Unfortunately, the authors do not acknowledge that by excluding observations with zero utilization, their results are likely subject to selection bias. In addition, they do not include country fixed effects to account for "multilateral resistance," which has become a norm in this line of work. Consequently, it is difficult to interpret the regression results.

Francois et. al. next rely on a standard CGE methodology to obtain quantitative estimates of the welfare effects of removing non-reciprocal trade preferences for poor countries and replacing them with multilateral trade reforms. Given that the data that enable an empirical analysis of this topic are available (and in fact are used in an empirical paper by Limao and Ollarreaga that was *not* highlighted for detailed review), it is more difficult to justify the CGE line of work. One benefit of CGE analysis is that it can be used for simulations of welfare changes of various liberalization scenarios. I was thus surprised that Francois et. al. did not use the above framework to simulate the welfare changes in poor nations stemming from tariff reductions in the home market as a part of multilateral reforms. These reductions might generate additional gains that might exceed the losses from preference erosion. An informed debate on reforming WTO architecture should focus on welfare implications of changes in both foreign market access and a nation's own trade policy.

More policy-oriented pieces by Hoekman and Prowse use the above knowledge and the policy expertise of World Bank fieldwork to argue for abolition of non-reciprocal trade preferences, replaced by additional aid to poor countries. This would, in part, compensate them for welfare losses associated with preference erosion, and be targeted toward "supply constraints" that prevent these countries from taking advantage of selling their goods in global markets. Although these ideas sound appealing, little is yet known about how such trade aid could be effectively implemented, or whether it would reach the

poor. There is still little known of why some countries (or individuals within countries) are not taking advantage of globalization, and how to identify and reduce the "supply constraints" that preclude these individuals from reaching the export market. Looking at the interaction of international trade with domestic institutions and financial development might prove fruitful in this area in future work.

C. Accessibility

The project reports and publications are accessible and the material is targeted at the intended audience. For example, the technical details of estimating the cost of removing non-reciprocal trade preferences are discussed in the working paper, aimed at a more academic audience. The more policy-oriented studies effectively use the quantitative findings of technical papers to argue for policy reform.

D. Results

Francois et. al. find that non-reciprocal preferences are often underutilized by developing countries because their use imposes a substantive administrative burden on these countries. The authors estimate that compliance costs erode about 4 percent of the preferential margin, and that very few products are subject to preferential margins that exceed this threshold. This reduces the value of preferences to poor countries. Numerical simulations suggest that income in poor countries would suffer the most from abolition of trade preferences by the EU (for example, an annual loss of \$460 million in Sub-Saharan Africa), but that the cost would be substantially reduced if trade preferences would be replaced in all OECD countries with multilateral trade reforms. The project convincingly argues that the current non-reciprocal preferences are not an efficient way to aid less-developed nations, and that instead, the countries should be compensated for preference erosion through additional aid. However, debate remains as to how this additional aid should be financed and allocated to ensure its best possible use.

This project is useful from a policy perspective and has potential to impact future research, especially the studies on non-reciprocal preferences that take on a more empirical approach to the topic (i.e. Limao and Olarreaga). To facilitate future research, the data on non-reciprocal preferences used in this project should be made publicly available on the World Bank website.

"Global Trade Architecture"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework			X		
Empirical application		X			
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging			X		
Survey design and sampling					
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations	X				
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations		X			
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate					
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy		X			
Actual or likely impact of research on:					
Government policy		X			
Future analysis		X			
The development community in general			X		
Overall Quality of Research		X	X		

Project #24: "Russia WTO Accession" by Tarr/Martin

A. Objectives

This project aims to quantify the *potential* impact of Russia's *future* WTO accession on Russian welfare and poverty, paying particular attention to the differential impact of reforms across industries and heterogeneous households. Several papers focus on medium to long-run consequences of liberalization of foreign direct investment (FDI) in services, tariff reductions, and increased access to foreign markets – the three policies identified by WB staff as key elements to WTO accession. The project also analyzes the welfare consequences of uniform and differential pricing of Russian natural gas in domestic and export markets. These studies originated in response to a request by the Russian government to assess the effects of WTO accession on the Russian economy. In addition, the piece on pricing in the natural gas industry was written after negotiations on this issue between the E.U. and Russia stalled.

B. Design and Implementation

The main challenge of this project is to provide a reliable quantitative assessment of the reforms, whose details are still being negotiated. The use of computable general equilibrium (CGE) models of trade, calibrated to Russia, is appropriate given this timing. The project is familiar with existing CGE research in this area. It expands the usual CGE framework by incorporating information on real households into simulations (an important extension, given the goal of estimating the poverty effects) and by modeling liberalization of FDI in service sectors, as Dixit-Stiglitz varieties that serve as inputs into downstream industries. Consequently, the entry of foreign service providers increases the variety of inputs and increases productivity (or lowers the quality-adjusted cost of inputs) in downstream industries.

The main concern with this project lies in the extent to which the theoretical framework underlying the analysis actually captures the key channels at work, and the degree to which predicted outcomes depend on the assumed parameter values of the model. My main concern is the modeling of service sector liberalization: because this is the channel that drives most of the results in the project, it would have been useful to examine whether the magnitudes are in line with existing empirical estimates of spillover effects of FDI to downstream industries. The existing empirical literature does not provide very robust evidence for large magnitude spillovers to downstream firms (although admittedly, most of the estimates are based on manufacturing industries, and complementarities might play a larger role in services). Also, most of these service industries are currently monopolies or oligopolies in Russia, so I was not fully convinced that modeling of these industries as monopolistically competitive with an infinite number of varieties/firms is justified.

Finally, it was puzzling that the model did not evaluate the short-run welfare effects of reforms, since this is what policy-makers worry about most to gain support for reforms.

That said, the CGE project does an excellent job subjecting the results to robustness analysis *within the existing framework*, and the conclusions are consistent with research findings.

The methodology used in the natural gas paper is very simple—i.e. it uses the tools from an introductory microeconomics course to argue that it is optimal for a Russian monopolist in the natural gas market to price discriminate between domestic and export markets.

C. Accessibility

The papers are in general well-written and well-targeted at the intended audience. Most of the studies include a technical and a non-technical version intended respectively for academic and broader audiences. In addition, the project generated a Handbook on Trade as a Development Tool that is used as a textbook in a World Bank Institute course in CIS countries and has been published in Russian.

D. Results

The CGE simulations predict that WTO accession will increase the value of consumption by 7 percent in the medium run and by up to 24 percent in the long run (although the authors themselves note this estimate is on the high side). Interestingly, the model predicts that households at all income levels will benefit from the reforms and that these benefits are relatively evenly distributed across income deciles, so that the reforms reduce poverty in the medium run. Liberalization of services accounts for a large majority of the gains. The benefits of tariff reductions (and increased foreign market access) are relatively small because most industry tariffs are already relatively low, while anticipated declines in ad-valorem equivalents of barriers to foreign provision of services range from 15 to 36 percent. In fact, the WTO accession only raises the value of consumption about 1 percent in the absence of service liberalization, and leads to a slight increase in poverty. The above results are important because they emphasize the importance of liberalization of the service sector, where negotiations within the WTO have been the most difficult.

Finally, a study showed that given the present market structure of the Russian natural gas industry, the uniform pricing across domestic and export markets demanded by the E.U. negotiators is not in Russia's interests. Instead, Russia should increase the domestic price of natural gas to the long-run marginal cost, while exploiting Russian market power in the E.U. market to charge a higher price for exports, rather than use uniform pricing across the two markets.

This is a nice project that contains useful information for policy makers, but likely won't strongly influence the direction of future research.

"Russia WTO Accession"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework		X			
Empirical application			X		
Statistical and econometric methods			X		
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources			X		
Data compilation, cleaning and cataloging		X			
Survey design and sampling	N.A.				
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations		X			
Extent to which conclusions are based on analytic evidence		X			
Appropriateness of the recommendations			X		
Appropriateness of output form (working paper, book, database, etc.) for intended audiences	X				
Availability of translated outputs where appropriate	X				
Extent to which research:					
Increases knowledge and understanding of the issues		X			
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy		X			
Future analysis			X		
The development community in general			X		
Overall Quality of Research		X			

Project #41: "Implementation of WTO Obligation" by Smarzynska

A. Objectives

This is an *ongoing* project that aims to quantify the *administrative* cost of implementing WTO accession agreements that cover the protection of Intellectual Property Rights, customs reform, establishment of sanitary and technical standards, and the regulation of trade in services. The project ultimately aims to rely on the experience of several developing countries that recently undertook the above reforms as part of WTO accession in order to design a template that trade officials in other nations can use for cost-benefit analysis of implementing future trade agreements. Such information might be useful for policy makers, in light of recent emphasis on the implementation of *trade-related regulatory reforms* in WTO accessions and in trade agreements more broadly.

B. Design and Implementation

The project's methodology relies on narrative country case studies of policy experience from the field. The projects provide a description of pre-reform economic conditions in a country, with an emphasis on the state of institutions closely related to implementation of a particular WTO regulatory agreement, and a summary of the content, sequencing, and implementation of each new policy. Overall, the reports reflect detailed country-specific knowledge of the institutions in place and the specifics of the WTO accession requirements.

The reports are supposed to provide an estimate of the cost of implementing various policies, the source of funding, and the importance of financial and technical assistance from foreign donors. A challenge facing the investigators is that such costs (and benefits) are often difficult to identify.

In addition, the project remains relatively silent on two fronts. First, for some of the countries it is too early to assess the benefits of implementing the above reforms, especially in the long run. Even for countries that had completed the reforms (for example, customs valuation reform in Argentina), the benefits were not quantified. Second, there is not much discussion of the opportunity cost of implementation of various WTO obligations in terms of alternative development goals. Given the large costs of the implementation, countries will likely face such tradeoffs. In general, the discussion of costs and benefits of implementing WTO agreements should keep these opportunity costs in mind (as Finger and Schuler convincingly argue in another project).

The project ultimately wants to create a cost-benefit template that can be used by a broad set of countries in the future to evaluate implementation of trade related regulatory agreements. This goal might be difficult to achieve given the limited number of case studies and large differences in pre-existing institutions across countries (which influence the costs and benefits of the reform).

C. Accessibility

To this end, the project reports are organized by country into chapters that focus on a particular regulatory reform. All chapters follow a similar structure so it is easy for the reader to find the needed material. Overall, the material is clearly presented.

D. Results

This is an ongoing project. The project finds that the cost of implementing WTO regulations is very high. For example, the total estimate for Cambodia is \$ 60 million, but this does not include the \$ 82 million needed in various legal reforms to support liberalization in the service sector. This in part reflects that the country might lack the institutions needed to implement the reforms (for example, customs valuation reform requires a well-functioning, modern customs administration). The costs vary depending on the nature of the reforms and the availability of domestic personnel to implement the reforms. Consequently, implementation often requires reliance on external donors for funding, technical assistance, and training of domestic personnel.

I don't expect this project to have a significant impact on future research. Yet, the collected information might be useful for policy makers for cost-benefit analysis to the extent it is combined with information on the benefits of implemented reforms, as well as opportunity costs of the reforms in terms of alternative development projects.

"Implementation of WTO Obligation"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives		X			
Analysis					
Theoretical/conceptual framework	N.A.				
Empirical application	N.A.				
Statistical and econometric methods	N.A.				
Use of existing knowledge and resources		X			
Data					
Awareness of other data sources		X			
Data compilation, cleaning and cataloging			X		
Survey design and sampling	N.A.				
Output Quality					
Writing quality (clarity, organization, etc.)		X			
Clarity of conclusions and recommendations			X		
Extent to which conclusions are based on analytic evidence			X		
Appropriateness of the recommendations	N.A.				
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate	N.A.				
Extent to which research:					
Increases knowledge and understanding of the issues			X		
Provides a sound basis for policy			X		
Actual or likely impact of research on:					
Government policy		X			
Future analysis				X	
The development community in general			X		
Overall Quality of Research			X		

Project #44: "WTO Dispute Settlement Database" by Hoekman

A. Objectives

This project constructs a comprehensive database of World Trade Organization (WTO) Dispute Settlement (DS) cases, available to a broader research and policy community. The information in the database provides a crucial input for systematic studies of various dimensions of the WTO dispute resolution process. For example, the data will enable researchers and policymakers to study potential asymmetries in the use of the DS system across WTO members from developing and developed countries, and then to evaluate the effectiveness of the process from consultations to the enforcement stage. The results of such studies are vital to ongoing discussions of whether or not, and if so, how, to reform the Dispute Settlement system to better reflect the needs and capabilities of developing countries.

B. Design and Implementation

To my knowledge, this is the first attempt to provide a database of cases filed with the WTO Dispute Settlement body. Overall, the database created by the project is satisfactory. The data are collected from official WTO documents related to DS proceedings, a reliable and appropriate source. The data set is also quite exhaustive, enabling its use in a broad range of research questions. For example, it provides a census of all cases filed with the WTO from inauguration of the DS system in 1995 to June 2004, which includes over 300 cases. The authors plan to continue to update the database as new rulings on existing cases are reached, and as new cases are filed. In addition, for each case, the database provides a large list of variables, containing detailed information on all stages of the legal process from initial consultation to enforcement of the rulings. The database documents the parties involved, the situation/product subject to dispute, invoked WTO agreements, and the timing of the legislative process, and identifies the WTO documents that include panel reports, appellate body reports, etc.

The main limitation of the database is in information on outcomes of rulings. The database currently lists the report number that contains the ruling, but does not provide any variables describing the outcomes of the rulings. This omission *seriously* diminishes its usefulness for research purposes. Although it is likely difficult to codify the rulings/reports (researchers/policymakers might need to consult the original documents), it would be useful to expand the database by inclusion of variables that provide some basic summaries of the rulings of various panels and the appellate body (i.e. in favor of complainant/respondent).

C. Accessibility

The World Bank has made the current version of the data set and the accompanying manual available on its webpage. However, its location is not well publicized. I was only able to locate the data set by knowing its exact name with the help of a search engine. The data are available in Excel spreadsheet format and are, in general, well organized. That said, the data manual is still quite incomplete and requires additional description and clarification of variables. Also, it is not clear how empty data cells

should be interpreted for the different variables in question. Do these "non-entries" reflect missing values, or that a particular variable was not relevant for a particular case (for example, because the case was resolved at an early stage of the DS)? Part of this confusion would be resolved by addition of a variable that denotes the stage at which each case was resolved or stopped.

D. Results

I expect that many research papers will use this database. Consequently, the project has a great potential to affect future research on the WTO. In general, I highly encourage the World Bank to create more trade-related data sets that can be used by the broad research community.

"WTO Dispute Settlement"

	S	AA	A	BA	U
<i>Please rate the following aspects of the project outcomes (or in the case of ongoing projects, design and intermediate outputs)</i>					
Topics					
Importance of the issues addressed	X				
Clarity of the project focus and stated objectives	X				
Analysis					
Theoretical/conceptual framework	N.A.				
Empirical application	N.A.				
Statistical and econometric methods	N.A.				
Use of existing knowledge and resources	N.A.				
Data					
Awareness of other data sources	X				
Data compilation, cleaning and cataloging		X			
Survey design and sampling	N.A.				
Output Quality					
Writing quality (clarity, organization, etc.)			X		
Clarity of conclusions and recommendations	N.A.				
Extent to which conclusions are based on analytic evidence	N.A.				
Appropriateness of the recommendations	N.A.				
Appropriateness of output form (working paper, book, database, etc.) for intended audiences		X			
Availability of translated outputs where appropriate	N.A.				
Extent to which research:					
Increases knowledge and understanding of the issues	X				
Provides a sound basis for policy	X				
Actual or likely impact of research on:					
Government policy		X			
Future analysis	X				
The development community in general			X		
Overall Quality of Research	X	X			

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