



Woodrow Wilson
International
Center
for Scholars

*Science, Technology, America
and the Global Economy*

TOOLS OF THE TRADE: MODELS FOR TRADE POLICY ANALYSIS

EDITORS: Christine McDaniel, Ken Reinert, and Kent Hughes



**Woodrow Wilson
International
Center
for Scholars**

*Science, Technology, America
and the Global Economy*

TOOLS OF THE TRADE:

MODELS FOR TRADE POLICY ANALYSIS

EDITORS: Christine McDaniel, Ken Reinert, and Kent Hughes



Available from :

Science, Technology, America, and the Global Economy
Woodrow Wilson International Center for Scholars
One Woodrow Wilson Plaza
1300 Pennsylvania Avenue NW
Washington, DC 20004-3027

www.wilsoncenter.org

ISBN 1-933549-31-9

The Woodrow Wilson International Center for Scholars, established by Congress in 1968 and headquartered in Washington, D.C., is a living national memorial to President Wilson. The Center's mission is to commemorate the ideals and concerns of Woodrow Wilson by providing a link between the worlds of ideas and policy, while fostering research, study, discussion, and collaboration among a broad spectrum of individuals concerned with policy and scholarship in national and international affairs. Supported by public and private funds, the Center is a non-partisan institution engaged in the study of national and world affairs. It establishes and maintains a neutral forum for free, open, and informed dialogue. Conclusions or opinions expressed in Center publications and programs are those of the authors and speakers and do not necessarily reflect the views of the Center staff, fellows, trustees, advisory groups, or any individuals or organizations that provide financial support to the Center.

The Center is the publisher of *The Wilson Quarterly* and home of Woodrow Wilson Center Press, *dialogue* radio and television, and the monthly news-letter "Centerpoint." For more information about the Center's activities and publications, please visit us on the web at

www.wilsoncenter.org.

Lee H. Hamilton, President and Director

Board of Trustees

Joseph B. Gildenhorn, Chair

David A. Metzner, Vice Chair

Public members: James H. Billington, Librarian of Congress; Bruce Cole, Chair, National Endowment for the Humanities; Michael O. Leavitt, Secretary, U.S. Department of Health and Human Services; Tamala L. Longaberger, designated appointee within the Federal Government; Condoleezza Rice, Secretary, U.S. Department of State; Cristián Samper, Acting Secretary, Smithsonian Institution; Margaret Spellings, Secretary, U.S. Department of Education; Allen Weinstein, Archivist of the United States

Private Citizen Members: Robin Cook, Donald E. Garcia, Bruce S. Gelb, Sander R. Gerber, Charles L. Glazer, Susan Hutchinson, Ignacio E. Sanchez

CONTENTS

3	Acknowledgements
5	Foreword
10	Executive Summary
11	Technical Summary
18	Abstracts
27	Participants
30	Timeline

ACKNOWLEDGEMENTS

The Woodrow Wilson International Center for Scholars and its Program on Science, Technology, America, and the Global Economy hosted the Tools of the Trade Conference and provided invaluable assistance in editing and publishing the conference report. Without them, neither the conference nor this report would have materialized.

In addition to the Woodrow Wilson Center, we owe a considerable debt to the International Trade Administration of the U.S. Department of Commerce, the Economic Research Service of the U.S. Department of Agriculture, and the U.S. International Trade Commission (ITC) for critical funding support.

Institutions do not function without the work of key individuals. Jonathan Menes, then chief economist in the Department of Commerce's International Trade Administration (ITA), had the vision for this conference. David Walters, chief economist in the Office of the United States Trade Representative, also made many valuable contributions to the actual shaping of the conference.

Ken Reinert, a professor at George Mason's School of Public Policy, played an important role from the start and provided the academic underpinnings for the issues. Grant Aldonas, then the Under Secretary of the ITA, Linda Conlin, then Assistant Secretary within the ITA, David Hummels, a professor at Purdue University, Robert Koopman, Director of Economics at the ITC, and Suchada Langley, with the Department of Agriculture, all provided very useful comments at various stages of developing the conference. Joseph Francois, now a professor at the University of Linz, Keith Maskus, professor at the University of Colorado at Boulder, and Chris Padilla, currently the Under Secretary of the International Trade Administration, delivered excellent keynote speeches.

Mary Thornton provided invaluable editorial assistance at the critical end stage of preparing the conference report. Many others provided useful input at various stages of this project. The authors would like to thank Mary Bohman, Mary Burfisher, Praveen Dixit, Mitch Ginsburg, Keith Hall, Bernard Hoekman, Jean Janicke, Francine Krasowska, Catherine Mann, Will Martin, William Shpiece, Phillip Swagel, David Tarr, and Steven Zahniser. The list of those who contributed valuable comments at some stage of this project is so long that many will have been accidentally omitted.

We owe major debts to the tireless Lynn Sha, Jane Mutnick, and Jacqueline Nader of the Woodrow Wilson Center for conference preparation, administration, and editing, as well as the Wilson Center's Audio Visual staff.

With so much expert advice and skilled assistance, any remaining errors in the conference report are, of course, the responsibility of the two editors, Dr. Christine A. McDaniel, now the Deputy Assistant Secretary for Economic Policy at the U.S. Treasury Department, and Dr. Kent H. Hughes, Director of the Wilson Center's Program on Science, Technology, America, and the Global Economy.

The views expressed in Tools of the Trade are the personal opinions of the editors and do not necessarily reflect the views of the United States Government.

FOREWORD

Trade models are not just an elegant academic exercise. The models and the assumptions that drive them underpin many of the estimates that influence the shape of trade agreements and the legislative response to them. A clear grasp of the models and their abilities and limitations can help policymakers and their advisors sort through the thicket of advocacy research that often surrounds public policy debates.

On January 22 and 23, 2004, the U.S. Department of Commerce and the Woodrow Wilson International Center for Scholars held the “Empirical Trade Analysis Conference: Strengthening Analytical Capabilities to Support Trade Negotiations.” The Economic Research Service of the U.S. Department of Agriculture and U.S. International Trade Commission provided valuable support for this conference, and the sponsors drew on the advice and experience of the Office of the United States Trade Representative.

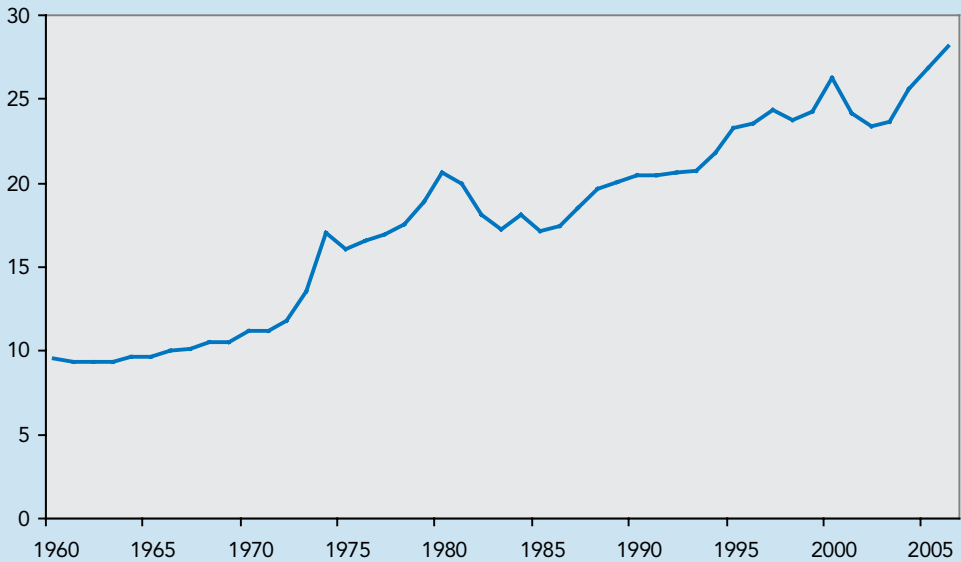
Distinguished conference participants included academics involved in the field of empirical trade analysis as well as key members of the trade policy community both in and outside government. Keeping with the vision of Woodrow Wilson, this conference brought together leaders of policy and academic research and moved the research closer to key policy questions, while the policy community gained a better understanding of the capabilities and limitations of the current state of art in empirical trade analysis. The main objective of the conference was to clearly define—on behalf of policymakers and stakeholders—the strengths and weaknesses of the economic models, the key assumptions that can drive the results, and the types of trade questions for which the models are best suited.

The United States derives substantial benefits from open trade and investment flows. Over many decades, increased international trade and investment have been significant factors in determining the pace of U.S. economic growth and the contours of the economy. Since 1960, flows of foreign direct investment as a share of GDP have increased from less than 1 percent to over 3 percent. International trade as a share of GDP has increased from 9 percent to 28 percent (chart 1).

Trade liberalization and globalization create new opportunities yet remain controversial subjects because competition invariably causes dislocations. The growth in trade and investment has been met with an escalating debate over the benefits of globalization.

Chart 1: Total U.S. trade as a share of GDP, 1960-2006

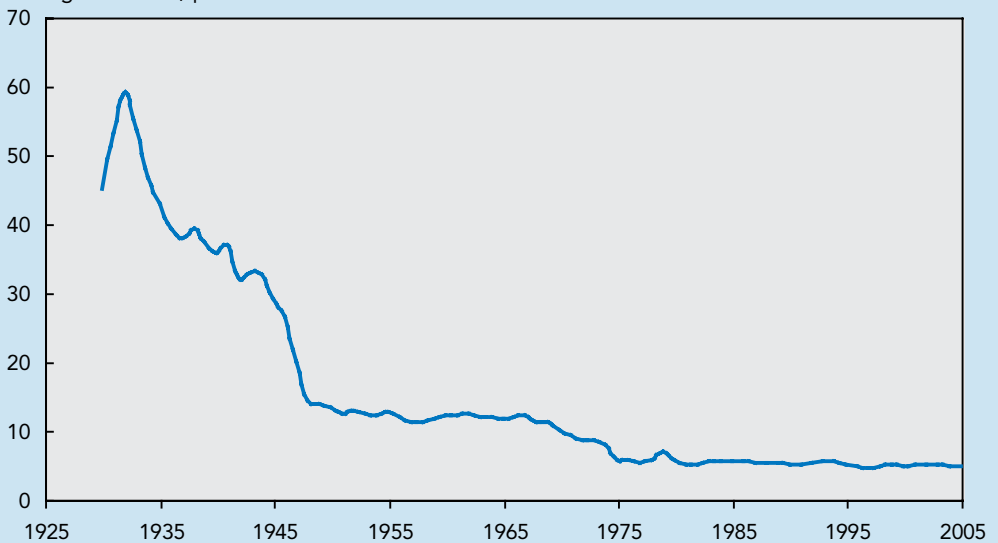
U.S. trade as a share of GDP, percent



Source: Department of Commerce (Bureau of Economic Analysis)

Chart 2: Average U.S. Tariff on Dutiable Goods, 1930-2005

Average U.S. tariff, percent



Source: United States International Trade Commission.

Political pressure for a more protectionist tilt to U.S. economic policy has risen significantly recently, this past year in particular. Discussion of free trade agreements are increasingly met with a lack of public support for engagement in the global economy.

Over three years have passed since the conference was held, yet the challenges for policy and analysis remain much the same. The Doha Development Round still appears far from complete, while the trade policy landscape continues to broaden with more and more attention being given to negotiating bilateral and regional trade agreements. Policymakers seek accurate economic analysis to help form and implement policies that serve the U.S. national interest.

Erosion of public support for trade liberalization was evident five years ago and has been diminishing since, as evidenced by the narrow passage of Trade Promotion Authority (TPA) in 2002, the close vote on the Central American Free Trade Agreement, the stalemate in the WTO Doha Round, and the current Congressional debate over the recently negotiated free trade agreements with Colombia, Korea, Panama, and Peru. As part of approving TPA, Congress required the Administration to report on the economic effects of future free trade agreements. The Congressional requirement of analysis coupled with public debate sharpens the call for clear and thorough empirical trade policy analysis.

Political leaders, the private sector, and civil society look to economic analysis as a guide to judging how trade agreements may affect the national economy as well as specific industries, regions, and households. Successful trade negotiations depend on the quality of the modeling and analytic tools used to set negotiating strategies, test proposals, and evaluate overall agreements. It was in this context that conference participants evaluated empirical analytical tools. Key lessons emerged:

Success Measuring Tariff Cuts: Progress has been made in estimating the economic impact of tariff reductions (chart 2), not only on the national economy but also on a state and regional basis. Economists are also better able to estimate the impact of tariff liberalization on different income groups—giving policymakers a better sense of the distributional effects of trade liberalization.

Changing Nature of Trade Agreements: Recent trade agreements differ from the historical Kennedy (1960s), Tokyo (1970s), and Uruguay (1990s) Rounds. Today's trade agreements are often bilateral or regional and span well beyond tariff reductions to include international trade in services, rules on intellectual property protection, and other barriers to trade and investment. Reliable and comprehensive analysis of modern trade agreements requires more advances in economic modeling to capture these new aspects of FTAs.

Major Improvements in Trade Data: The quality of the underlying trade data has improved over the decades thanks to data innovations in updating trade barrier information,

identifying tariff preferences, and clarifying domestic support and export subsidy measures in agriculture as opposed to treating them in their *ad valorem* equivalent.

Growing Importance of Non-Tariff Barriers: Much more work is needed to measure the economic importance of non-tariff barriers. These behind-the-border trade barriers can be policies or official practices that unfairly inhibit competition. Examples include import quotas, unpredictable standards, non-transparent regulatory processes, and limited distribution networks. Recent innovations in modeling non-tariff barriers contributed to a broad consensus at the conference that the economic gains from reducing non-tariff barriers likely exceed the gains from reducing tariffs.

The Challenge of Negotiations on Services, Investment, and Rules: Key issues in today's trade agreements include liberalizing trade in services, adopting rules on foreign investment, protecting intellectual property rights, and limiting government subsidies. Existing economic models need to expand beyond tariffs to account for these new areas of negotiation.

The Devil and the Details—The Critical Importance of Assumptions: The results of economic models are sensitive to key assumptions made by the modeler. For instance, the market structure and responsiveness to price changes may strongly influence the model's results. Trade models are particularly sensitive to assumptions about how easily domestic and imported products can be substituted for each other, the so-called Armington elasticity. Depending on these assumptions, models can produce a wide range of results—in magnitude and sometimes even direction—for a single trade policy question.

Economists have also created models that capture market conditions outside the traditional assumptions of perfect competition. For instance, in modeling markets where a single firm or a handful of firms dominate or influence the market, there is considerable disagreement over exactly what specifications should dictate the model's form with the specifications influencing the model's output.

Difficulty with Dynamics: Modelers face an even more daunting challenge in attempting to estimate the impact of trade on key factors such as levels of investment, innovation, and monetary policy. Increased competition from international trade can push a firm or an industry to invest in additional research, speed the introduction of new products, or make a pro-growth shift in public policy.

Research for the Future: The economics profession and modeling community must continue to improve their ability to estimate the impact of non-tariff barriers, link trade changes to state and regional economies, model the economic effects of services and investment liberalization, and capture dynamic effects of trade liberalization.

Models and Policymakers: Policymakers can help researchers increase the relevance of their models by explaining key aspects of trade agreements, stressing priorities, providing important data inputs, and allocating funds for improved data collection. Researchers can help policymakers interpret their results by explaining key assumptions that drive the results, testing the robustness of the results, and explaining model limitations. With knowledge of the different kinds of models and which assumptions drive their results, the policymaker will be better prepared to evaluate competing research results.

EXECUTIVE SUMMARY

Trade negotiations at the bilateral, regional, and multilateral level have proliferated in the past two decades. Experiences with the North American Free Trade Agreement, China's accession to the World Trade Organization (WTO), a host of bilateral free trade agreements, and the struggle to successfully conclude the WTO Doha Round have demonstrated the need for governments to comprehensively assess the potential impacts of trade policy decisions on their economies. This assessment requires sophisticated yet transparent analytical tools to aid in weighing individual negotiating offers and evaluating an overall trade agreement.

Trade economists have developed standard models and tools to assess tariff liberalization scenarios and aid policymakers in crafting welfare-enhancing agreements. But the trade policy landscape is changing and modeling tools have not kept pace with the expansion of policy issues.

For example, economies around the globe are becoming increasingly service-oriented. In the United States alone, services account for over two-thirds of the economy and about 80 percent of the workforce. Trade in services is increasingly on the agenda for free trade agreements (FTAs), and policymakers must evaluate the benefits of services trade liberalization. Yet, current empirical trade tools are nearly all focused on trade in goods. And while academics and practitioners have achieved remarkable progress in measuring the economic effects of a tariff cut, traditional tools are less able to quantify regulatory measures, administrative requirements and other non-tariff barriers, which are quickly becoming the new frontier of trade protection.

This conference volume discusses the current state of the art in empirical trade analysis. For analysts, the volume offers best practices in modeling policy questions of the new trade era. For the policy community, the volume reveals abilities and limitations of current tools of the trade.

TECHNICAL SUMMARY

Trade economists and policymakers gathered at the Woodrow Wilson Center for the Empirical Trade Analysis Conference in January 2004 to achieve the following key goals:

- Assess the current capabilities of economic models and analytical techniques used to aid officials in developing trade policy strategies and conducting trade negotiations.
- Interpret the results of these models and their relevance to trade policy issues.
- Examine how the capabilities of such models might be expanded to better support government-to-government trade negotiations and issue management.

I. METHODOLOGIES ASSESSED

Conference participants discussed three methodologies to quantitatively assess the impacts of trade liberalization: applied general equilibrium (AGE) modeling, partial equilibrium modeling, and econometric analysis such as gravity modeling. Below we consider each in turn.

AGE models are useful tools to estimate economy-wide effects of trade policy changes. These models are *ex ante* tools, used to forecast the economic effects of a policy change, namely tariff cuts. The distinguishing feature of an AGE model is its comprehensive nature. It attempts to model an economy as a whole, with multiple sectors linked to each other through competition for labor and physical capital and through input-output relationships. The strength of these models lies in their ability to uncover the impacts of policies as they ripple throughout a given economy and spill-over into trading partners as well. For example, an increase in U.S. steel tariffs raises U.S. steel prices and increases steel output. This affects not only steel producers in the United States, but the downstream firms such as auto-makers that use steel, other U.S. firms that compete with steel firms for capital and labor, and foreign steel firms that hope to sell in the U.S. market.

While it is conceptually straightforward to see that such ripple effects might exist, quantifying their magnitude requires the elaborate structure of an AGE model.

Practitioners begin by calibrating their models to actual economic conditions in a base year, and then simulate the economic changes that would result from a change in policy. These simulations provide insights into how policy changes can affect the following: imports, exports, and production by sector; employment, wages and the return to capital; and, perhaps most importantly, aggregate economic welfare and income growth.

This output can be of great value to policymakers, but there are drawbacks. One critique is that these models typically incorporate *ad hoc* assumptions about the price responsiveness of supply and demand, or elasticities. Another is that, because of their complexity, the key elements that drive the results of a scenario are not always transparent. Further, AGE models and their associated databases are costly to build and maintain. (As a result, many practitioners have developed standardized approaches to employing the models and data provided by the Global Trade Analysis Project (GTAP), (Hertel 1997) which underlies a number of models included in this volume.) The large number of interactions and linkages that these models attempt to track makes it difficult for policymakers to fully understand where the results are coming from. In the example above, the effect of a steel tariff depends on the substitutability of U.S. and Brazilian steel, the cost of expanding local steel production, the quantity of steel employed in each automobile produced, the ease with which labor and capital can be substituted between steel and other uses, and so on. All of these linkages must be captured in key parameters and assumptions, such as price responsiveness and substitutability, that must be estimated or assumed. Changes in these parameters can yield different outcomes of potentially large significance.

Partial equilibrium models are also used to evaluate the economic effects of trade liberalization, but within narrowly defined product categories. In the steel example, a partial equilibrium model would be used to examine the effects of a higher tariff on imports, domestic prices, and domestic steel production. However, the model would ignore linkages to other sectors through input-output relationships (e.g. automobile sector use of steel) and through markets for capital and labor.

Partial equilibrium models focus on a limited set of factors and ignore cross-sector linkages, and do not provide economy-wide effects or broad welfare calculations. However, they are appropriate when the goal is to provide relatively rapid and transparent analysis of the direct effects of a wide range of commercial policy issues. Partial equilibrium models are often used for “injury determination” in anti-dumping cases where the primary concern is whether imports have led to a decline in output or employment in the affected domestic sector. Since these models do not provide economy-wide effects they are most useful when the spillover effects are likely negligible and the industry in question is not large relative to the entire economy. For example, the dumping of Chinese crawfish may effect the domestic crawfish industry but have little effect on the rest of the economy.

Econometric modeling and estimation can be useful in providing a retrospective look at the economic effects of a policy change such as tariff cuts. This type of *ex post* analysis

is also useful as an input into applied general equilibrium and applied partial equilibrium analysis.

Because econometric analysis is more narrowly focused than AGE modeling, it can identify “experiments in the data,” or historical episodes that shed light on important phenomenon. Some examples include the link between trade and economic growth at the macro level, the degree to which trade growth has led to rising wage inequality, and the dynamic effects of trade openness on productivity at the firm level. These are important effects for the policymaker to be aware of, but difficult to identify properly in AGE work.

Above, we noted that AGE modelers need a number of key parameters as inputs into their calculations. For the steel example, this included the substitutability between U.S. and Brazilian steel, which is another way of asking: when the price of Brazilian steel rises, how quickly do U.S. steel consumers substitute toward U.S. producers? Because trade data for previous years provide us with a record of price changes and corresponding quantity responses, the econometrician can estimate the degree of substitutability between different sources of steel.

Gravity modeling, a common approach to econometric estimation of trade flows, has experienced a recent revival in the literature. It is typically used to analyze the trade effects of trade liberalization that has already occurred by relating trade growth to tariff cuts. Gravity models are also used to estimate the trade effects of non-tariff barriers that lack an obvious *ad valorem* tariff equivalent. For example, does poor infrastructure pose a greater impediment to trade than high tariff rates? The creative use of gravity modeling includes efforts to identify the trade-impeding (or trade-facilitating) role played by information, immigration, product standards, rule of law, corruption, and infrastructure investments. Non-tariff barriers are increasingly important in trade negotiations, but without a way to assess their quantitative impacts it is difficult to employ them in more general AGE work. This is where econometric analysis can prove especially useful.

II. INTERPRETING RESULTS AND DETERMINING THEIR POLICY RELEVANCE

Empirical trade analysis is useful to policymakers only when the results are easily interpreted and relevant to current policy questions. In his keynote address, Keith Maskus advised researchers and practitioners alike to get more involved in debates in the popular press and to counter incorrect assertions that are easily refutable with data. Faced with a multitude of analyses with different results—varying in magnitude and sometimes in direction—policymakers can be puzzled. Dominique Mensbrugghe, in his conference remarks, warned that “policy analysis can easily be discredited if various studies come to opposite conclusions and the reasons for these differences are not readily understood or explained.”

Knowing the key factors behind variation in results and comparing model structures and methods are important. In the conference session on model comparisons and interpretations, participants discussed how different models can generate different results, and that some of the differences across the model results can be traced to differences in the underlying data and important model parameters such as elasticities of demand. Authors may also employ different model variants, tariff data (with or without tariff preferences), solution techniques, and levels of aggregation that impact results. Assumptions that can greatly affect the results include whether firms have market power or are perfectly competitive; whether the solution techniques involve comparative static or dynamic solutions; whether countries are small, open economies (unable to affect world prices), or large countries with pricing power; and whether the model has just one representative household or households that vary by education or incomes. Harrison, Rutherford, and Tarr consider a large body of empirical trade work and present useful rules of thumb for evaluating free trade agreements in AGE models.

MODELING AGRICULTURAL TRADE REFORM IS PARTICULARLY COMPLEX

While policymakers increasingly rely on AGE models to analyze global agricultural policies, Robinson, Theirfelder, and Burfisher show that how farm programs are represented in the model can drive the results. For instance, whether agricultural reform affects supply or price can determine whether the reform increases or decreases trade in the model. The authors also show a case in which three countries use domestic price supports and export subsidies that vary with market prices, absorbing market price shocks and lowering agricultural supply response. Using fixed *ad valorem* price wedges to represent farm programs tends to produce erroneous results.

The strength of the AGE approach is its comprehensive perspective on the ways in which agricultural commodity taxes and subsidies influence not only farmers but the non-farm economy as well. These spillover effects, operating through the demand for intermediate inputs as well as markets for land, labor, and capital, affect income and welfare in both the domestic economy and economies of trade partners. At the same time, the complexity of these models can generate some skepticism about their results.

TRADE MODELS DO NOT EFFECTIVELY IDENTIFY WINNERS AND LOSERS OF TRADE REFORM

AGE models assess the likely impacts of changes in trade policies on the average economic agent (worker, firm, consumer, and household), but are often criticized for ignoring distributional effects. In practice, there are winners and losers of trade reform. For example, liberalizing U.S. trade in sugar may adversely affect the U.S. sugar industry but may benefit downstream processed food sectors such as confectionery manufacturers. Governments need to know which households (or states or regions) may lose from trade reform in order to design effective compensatory schemes that mitigate the effects on the losers. To guide future research efforts, Harrison,

Rutherford, and Tarr show that large-scale household survey data allow modelers to better examine the distributional welfare effects of trade reforms and the link between trade and poverty. Also, Dixon and Rimmer discuss different strategies for generating results at a sub-national level in the AGE framework.

DYNAMIC MODELS DO NOT NECESSARILY PRODUCE LARGER RESULTS

Static AGE models evaluate the effect of a policy change on an economy at one point in time and compare differences in an economy between alternative steady states in the future—one with a policy shock and one without. Dynamic models have an explicit time dimension and track changes in macroeconomic variables such as capital accumulation or productivity. Scholars increasingly incorporate dynamic analysis in their models to better understand changes over time. For example, Kehoe shows that by incorporating dynamic changes in total factor productivity, one can better explain the macroeconomic fluctuations in Mexico from 1980–2002.

However, the linkage between the theoretical notions of dynamic effects and practical modeling techniques is often unclear. It is often thought that adding a dynamic element to AGE models magnifies welfare gains from trade liberalization. Rutherford and Tarr show that simply adding dynamics to a standard AGE model will not necessarily increase welfare results. Though, the authors state that allowing for productivity impacts, technology transfer, or learning effects of trade liberalization generally tends to produce larger economic effects.

MODELING RESULTS ARE SENSITIVE TO BEHAVIORAL PARAMETERS

The degree of substitutability between domestic and imported goods (and across different import sources) is a key parameter for model analysis. In general, the greater substitutability, the larger the economic effects from trade liberalization. In one paper, analysis of a potential Free Trade Area of the Americas depends critically on the extent to which FTAA tariff cuts would cause U.S. imports to shift away from Asian and toward South American exporters. This parameter directly affects how trade volumes respond to changes in prices, which can have significant impacts on the magnitudes and even direction of estimated welfare gains.

Modelers can choose values of these parameters by consulting the econometric literature with parameter estimates and/or by their own discretion, which leaves the model results sensitive to the analyst's choice of parameter values. It is well understood that if the possible values of the substitution parameters cover a wide range then the range of possible modeling outcomes will also be wide. Hertel, Hummels, Ivanik, and Keeney ask how confident policymakers can be in AGE analyses of free trade agreements. In their study of the Free Trade Agreement of the Americas, the authors estimate substitution parameters and the confidence intervals of the model results. This type of systematic “sensitivity analysis” reveals which model outcomes are known with greater (and lesser) certainty and provides a better guide to policymakers.

NON-TARIFF BARRIERS ARE INCREASINGLY IMPORTANT IN TRADE, YET NOT WELL-MEASURED

Quantitative trade policy analysis tends to focus primarily on tariff cuts, because *ad valorem* tariff rates, before and after liberalization, are easily measured. Non-tariff barriers, on the other hand, are not easily measured, but are increasingly cited as more trade-restricting than tariffs. Non-tariff barriers include prohibitions and quantitative restrictions on imports, technical barriers to trade, anti-dumping duties, licensing requirements, and burdensome customs procedures.

Scott Bradford discusses the advantages and drawbacks of the most common methods for measuring non-tariff barriers. Gravity models compare the deviation between actual and predicted trade flows and associate that deviation with non-tariff barriers. This method requires having a high degree of confidence in the model that predicts what trade would be in the absence of barriers. Using a different method, Bradford estimates a set of tariff equivalents for non-tariff barriers for the OECD countries, and uses an applied general equilibrium model to assess the trade and welfare effects of removing these measures. Bradford's findings can be useful to policymakers in determining the extent to which barriers restrict goods trade, and in deciding where to spend negotiating capital on eliminating barriers and maximizing economic welfare gains.

MEASURING BARRIERS TO TRADE IN SERVICES IS ALSO A CHALLENGE

Similarly, there are a host of barriers to international trade in services, none of which are easily evaluated in the traditional models. The challenge modelers face is how to either incorporate these issues into existing models or build new models. Rutherford, Tarr, and Shepotylo present a modeling approach in which trade barriers in services are translated into restrictions on the movement of capital across borders in the form of foreign direct investment. The results suggest that the economic payoff from services liberalization is eight times greater than goods trade reform alone. Other attempts to model services liberalization, including those by Brown, Deardorff, and Stern, also produce results showing a much higher payoff from services trade reform than goods trade reform.

TRADE REFORM IS GENERALLY POSITIVE BUT NOT SUFFICIENT FOR ECONOMIC GROWTH

Does increased trade lead to increased economic growth? There is an ongoing disagreement as to whether trade volumes can be considered to be an explanation of growth or an outcome of growth, trade policy, infrastructure, geography, and institutions.

Econometric growth analysis is an *ex post* tool used to statistically explain the rate of growth in per capita gross domestic product (GDP). When trade policy is the focus, trade and trade measures are used as explanatory variables that help us to understand the sources of growth. Many of the least-developed countries have seen little growth and have very high levels of poverty incidence, even as trade has increased.

Dollar and Kraay conduct an *ex post* econometric growth analysis on a sample of 100 countries and find a strong positive effect of trade openness on growth levels. Roe, Somwaru, and Diao argue that, while there may be empirical econometric evidence that trade is positively linked to growth, other econometric analyses find that when institutions are used as a control, “trade can have an indirect effect on incomes by improving institutional quality.” Their analysis of trade reform and economic growth in sub-Saharan economies suggests that trade may be a necessary, but not sufficient, ingredient for economic growth and that institutional quality may be just as important. Conference participants underscored the role of trade capacity building as a complementary factor to trade liberalization.

III. BUILDING BETTER MODELS TO SUPPORT POLICYMAKERS

The aim of the Tools of the Trade conference was to discuss best practices in empirical trade analysis. Ideally, these best practices will improve models’ abilities to capture the broad scope of policy efforts, increase the robustness and transparency of results, and keep analysis applicable to the policy choices that governments face. There are several ways that trade modelers can promote best practices:

- Improve modeling of actual trade reform under consideration
- Estimate distributional effects of trade reform, at sub-regional and household levels
- Explain the capabilities and limitations of dynamic modeling
- Conduct systematic sensitivity analysis to give more certainty to model outcomes
- Incorporate non-tariff barriers
- Include analysis of the liberalization of international trade in services
- Combine econometric and AGE models for a richer set of results

As trade has grown in importance for global growth and international diplomacy, accurate and clear-sighted economic analysis has become indispensable to both the creation and implementation of sound policies. It is our hope that this summary publication will help guide future empirical research and strengthen analytical capabilities to support trade negotiations.

ABSTRACTS

The following pages review the conference topics and the papers presented along with the abstracts. The full text papers are available on the conference website: www.wilsoncenter.org/eta.

TOPIC 1: ECONOMIC EFFECTS OF TRADE LIBERALIZATION: MODEL COMPARISONS AND INTERPRETATIONS

Economic analysis can help guide policymakers as multilateral and regional negotiations continue. Understanding the economic effects of a wide range of scenarios is particularly useful for identifying the trade liberalization efforts that can have the largest payoffs. In assessing global and regional liberalization, policymakers often consider analyses that examine similar policy changes but offer different outcomes.

GLOBAL LIBERALIZATION

Paper: “Modeling OECD Agricultural Programs in a Global Context”

Authors: Sherman Robinson, IFPRI; Karen Theirfelder, U.S. Naval Academy; Mary Burfisher, Economic Research Service, USDA.

Abstract: The authors deconstruct an AGE model that was used to analyze farm programs in the United States, EU, and Japan. The model incorporates the GTAP data on production, trade, and structural parameters that are found in most global AGE models in use today. The agricultural supply response in the model is found to be sensitive to a reasonable range of assumptions about factor market elasticities. Global agricultural trade and price results are also sensitive to a range of values for import demand and export supply elasticities. The authors conclude that the size of the elasticities matters to the magnitude of trade results, but cite a growing body of empirical literature that can guide the choice of appropriate trade parameter estimates.

Paper: “Market Access in Non-Agricultural Goods: What is at Stake in the Development Round?”

Authors: Mohamed Hedi Bchir, Lionel Fontagné, and Sébastien Jean, CEPII.

Abstract: Citing the Doha Ministerial declaration to reduce or eliminate tariffs on non-agricultural products, the authors explore AGE modelling issues and results of tariff cuts. They build a set of scenarios at the detailed product level to evaluate accurately the impact of a choice of a tariff cut formula, and focus on “modalities of negotiation to be agreed.” Finally, they assess their impact on world economies with MIRAGE, an AGE model conceived to study trade policies. This approach, based on detailed information, should provide a more accurate evaluation of the gains associated with trade liberalisation. The authors find that by working at too aggregated a level or using biased aggregators, modelers might underestimate the economic gains from trade reform, while neglecting to account for trade preferences might overestimate the gains to be expected from the conclusion of the Round.

REGIONAL LIBERALIZATION

Paper: “Rules of Thumb for Evaluating Preferential Trading Arrangements: Evidence from Computable General Equilibrium Assessments”

Authors: Glenn W. Harrison, University of Central Florida; Thomas F. Rutherford, University of Colorado; David Tarr, World Bank.

Abstract: Most of the interesting results on the welfare effects of regional arrangements are ambiguous at a theoretical level. Many questions only have quantitative answers that are specific to the particular model and policy considered. Thus, to determine the impact of prospective regional arrangements, governments often rely on a quantitative evaluation. Usually at the request of a government involved, the authors implemented a number of AGE models to inform policymakers. The authors summarize the main conclusions drawn from these studies, focusing on applications in the Americas.

NON-TARIFF BARRIERS

Non-tariff barriers (NTBs) are increasingly cited as more restrictive than tariffs, while tariffs are commonly the only aspect quantified in trade policy analysis. The abstracts in this section will offer a framework in which to consider NTBs, as well as the quantification of such measures. Analysis should be aimed at identifying which measures are among the most restrictive, and how economy-wide effects of removing non-tariff barriers compare to those of removing tariffs alone.

The service sector, accounting for more than half of GDP for an increasing number of middle and high income countries, is an important component of trade

policy. But the analytic tools to study the effects of services liberalization are still in an early stage. Abstracts in this section reflect the state of the art in services liberalization modeling and how to best inform policymakers of the economy-wide effects of such agreements.

Paper: “Non-Tariff Barriers in Rich Countries: Quantifying Them, Identifying Them, and Assessing Their Impacts”

Author: Scott Bradford, Brigham Young University and IIE.

Abstract: This paper weighs the benefits of reducing non-tariff barriers. If the barriers are small, then perhaps the time has come to place a lower priority on achieving deeper economic integration. On the other hand, if the barriers remain substantial, it could be worthwhile to invest considerable political capital in their elimination. This paper presents a new method for estimating tariff equivalents of non-tariff measures for final goods in OECD countries. The analysis exploits detailed, comprehensive, and careful price comparisons in order to derive estimates of tariff equivalents for NTBs. One potential weakness of this method, at least in the eyes of policy professionals, is that it does not identify the sources of the price gaps. In this paper, therefore, the authors present preliminary information on the policies behind the estimates. They then use an applied general equilibrium model to provide a broad-brushed assessment of the impact of these NTBs. The results imply that NTBs greatly restrict trade in OECD countries and that removing them would bring large gains to the world economy, for rich and poor countries alike. Thus, this research implies that the benefits from continued efforts to negotiate the reduction of NTBs will indeed exceed the costs.

Paper: “Assessing the Impact of Liberalization of Services: Case Study of Russian Accession to the WTO”

Authors: Thomas Rutherford, University of Colorado; David Tarr, World Bank; Oleksandr Shepotylo, University of Maryland.

Abstract: The authors employ an AGE model of the Russian economy to assess the impact of accession to the World Trade Organization (WTO) on income distribution and the poor. They find that the virtually all households gain from Russian WTO accession in the medium term, with average gains ranging from a minimum of a 2 percent increase in household income to 25 percent. Services liberalization and endogenous productivity effects from trade liberalization eliminate virtually all losers from a WTO Accession reform package. These elements have never been incorporated in poverty analysis before and they result in larger estimated gains for the average household. Thus, even households that are significantly below the average still manage to gain. Though virtually all households gain in the medium term, many households may lose in the short term due to the costs of transition. Thus, safety nets are crucial for the poorest members of society during the transition.

MEASURING ECONOMIC EFFECTS IN DEVELOPING COUNTRIES

Developing country markets are growing, leading to increased trade opportunities amongst these countries. Thus, the potential economic effects of South-South trade liberalization become increasingly important. This session will discuss the econometric evidence to date on trade and growth, developing country aspects of trade policy analysis, and agriculture liberalization.

Paper: “Trade, Growth, and Poverty: A Review of the Cross-Country Evidence”

Authors: Aart Kraay and David Dollar, World Bank.

Abstract: The evidence from individual cases and from cross-country analysis supports the view that globalization leads to faster growth and poverty reduction in poor countries. To determine the effect of globalization on growth, poverty, and inequality, the authors first identify a group of developing countries that are participating more in globalization. China, India, and several other large countries are part of this group, which includes well over half the population of the developing world. Over the past 20 years, the post-1980 globalizers have seen large increases in trade and significant declines in tariffs. Their growth rates accelerated between the 1970s and the 1980s and again between the 1980s and the 1990s, even as growth in the rich countries and the rest of the developing world slowed. Though, while post-1980 globalizers are catching up to the rich countries, the rest of the developing world (the non-globalizers) is falling further behind. The authors ask how general these patterns are, using regressions that exploit within-country variations in trade and growth. After controlling for changes in other policies and addressing endogeneity with internal instruments, they find that trade has a strong positive effect on growth. Finally, the authors examine the effects of trade on the poor. They find little systematic evidence of a relationship between changes in trade volumes (or any other measure of globalization they consider) and changes in the income share of the poor, nor do they find evidence of a link between changes in trade volumes and changes in household income inequality. They conclude, therefore, that the increase in growth rates that accompanies expanded trade translates, on average, into proportionate increases in incomes of the poor. Absolute poverty in the globalizing developing economies has fallen sharply in the past 20 years. The evidence from individual cases and from cross-country analysis supports the view that globalization leads to faster growth and poverty reduction in poor countries.

Paper: “Agricultural Trade Barriers and the Role of Institutions in African Development”

Authors: Terry Roe, University of Minnesota; Agapi Somwaru, Economic Research Service, USDA; and Xinshen Diao, IFPRI.

Abstract: This paper focuses on the interdependence between international trade and

institutional reform. The authors suggest that the trade barriers erected by advanced countries to the agricultural exports from poor countries—and sub-Saharan Africa in particular—impede economic growth and development. Recent literature suggests that trade barriers inhibit institutional reform, which is a major factor affecting economic growth. Empirical analysis of trade reform and economic growth shows that sub-Saharan economies can repeat potential gains from increased trade that are larger when such integration with world markets induces institutional reform.

Paper: “Is Agricultural Liberalization Beneficial to Developing Countries?”

Authors: Antoine Bouet, CEPII and Université de Pau et des Pays de l’Adour; Jean-Christophe Bureau, INRA and CEPII; Yvan Decreux, CEPII; Sébastien Jean, CEPII.

Abstract: Using an adapted version of the MIRAGE model, this paper aims at assessing the impact of a widespread liberalization in agriculture, as proposed in the revised Harbinson proposal. The AGE model includes imperfect competition and increasing returns to scale in industry and services. It assumes land and labor mobility to be imperfect across sectors and developing countries to have dual labor markets. The modelers placed a special emphasis on measuring protection and domestic support. Domestic support data is updated to 2001 for the EU and the U.S., and accounts for the Agenda 2000 reform and the New Farm Bill. Protection data, from the MAcMaps database, describes applied tariffs, taking preferential agreements exhaustively into account. The liberalization hypotheses used in each scenario are applied at the HS-6 level. The results show that, far from being uniform, the impact of agricultural liberalization on developing countries is strongly contrasted. This has been blurred, in many previous analyses, by geographical aggregation, or by not taking tariff preferences into account.

TOPIC 2: CAPABILITIES AND LIMITATIONS OF ANALYTICAL TECHNIQUES

AGE APPROACH TO TRADE LIBERALIZATION

The following papers reviewed the current state of the art in applying AGE modeling to trade policy analysis, with an aim to address capabilities and limitations. Dynamic effects of trade liberalization increasingly appear in current modeling efforts, while the linkage between the theoretical notion of dynamic effects and the practical modeling techniques is often unclear.

Paper: “How Confident Can We Be in CGE-Based Assessments of Free Trade Agreements?”

Authors: Thomas Hertel, David Hummels, Maros Ivanic, and Roman Keeney, Purdue University.

Abstract: CGE analysis is often criticized for its lack of econometric foundations. The goal of this paper is to show that it is indeed possible to provide substantial statistical underpinning to policy analyses conducted in the CGE context. The authors focus their attention on analysis of Free Trade Agreements—specifically, the Free Trade Agreement of the Americas—for which the key behavioral parameter is the elasticity of substitution among imports from different countries. This governs the extent to which non-FTAA regions will be displaced by the preferential reduction in tariffs on imports from FTAA countries. The authors conclude that there is great potential for combining econometric work with CGE-based policy analysis in order to produce a richer set of results that are likely to prove more satisfying to the sophisticated consumer of model results. In the end, the key question is always: How robust are the policy findings? In this paper the authors found that some of the FTAA conclusions are robust, while others are not. This is important information for policymakers seeking to make key political decisions based in part on results from this type of economic model.

Paper: “Modeling the Dynamic Effects of Trade and Foreign Investment Liberalization”

Author: Timothy Kehoe, University of Minnesota and Federal Reserve Bank of Minneapolis.

Abstract: Policies governing trade and foreign investment can have important effects that are not captured by static applied general equilibrium (AGE) models. Most importantly, such policies can affect changes in efficiency, measured as total factor productivity (TFP). Numerical experiments using a simple dynamic AGE model indicate that fluctuations in TFP are the primary determinants of macroeconomic fluctuations in Mexico over the period 1980–2002. Furthermore, trade and foreign investment liberalization can change incentives for both domestic savings and foreign investment, thereby changing the rate of capital accumulation. Each of these two sets of effects can alter both the rate of economic growth in an economy and relative prices and can dwarf the effects analyzed by static AGE models.

ALTERNATIVES TO THE AGE APPROACH

Data constraints leave the results from AGE models effectively reliant on illustrative numbers for many key inputs. The papers in this section present alternative analytical tools to substitute or complement the simulation approach to trade policy analysis. Gravity models have been used to model regional FTAs, though questions remain

about their limitations. Can such models be applied more generally? What guiding framework can we use when searching for the right tool in trade policy analysis?

Paper: “Econometric Approaches to Trade Policy Analysis”

Authors: David Hummels, Purdue University, NBER.

Abstract: In the past decade, there have been substantial advances in the econometric analysis of trade patterns and trade policy. This paper discusses some of these advances, with an eye toward identifying tools that can be useful for trade policy analysis. There are two parts. The first and primary focus addresses how good econometric work serves as an input into applied general equilibrium (AGE) modeling. The second part makes a case for why econometric work should be valued as an important independent input into policy analysis, and in some cases should be considered as a substitute for AGE work.

EVALUATING MODELING TECHNIQUES AND VALIDATION FOR POLICY USE

Ex post performance evaluations of applied general equilibrium models are essential if policymakers are to have confidence in the results produced by these models. The papers in this section address how various models perform and how modeling techniques, such as production structure, assumptions of imperfect competition, returns to scale, and productivity/new trade theory aspects, affect key modeling results including welfare effects.

Paper: “Quantifying the Impact of Trade Reform on Poverty”

Authors: Glenn W. Harrison, University of Central Florida; Thomas F. Rutherford, University of Colorado; David Tarr, World Bank.

Abstract: Trade policy reforms typically result in some households winning and some households losing. Given the diversity of households in an actual economy, even the most attractive reforms will typically result in some households losing, at least in the short run. One approach is just to accept these losses, if they are “acceptable,” as the price of achieving some greater good. Another approach is to argue against any reform that hurts even one household, especially if that household is poor. These stylized positions sound extreme, but are repeatedly encountered in the literature. The authors believe that these are false alternatives. If one can identify which households lose from trade reform, it is often possible to design policies that mitigate the effects on the poor at least cost. Each of these steps involves important, derived methodological challenges for analysts. The authors review the modeling issues involved in the *ex ante* analysis of the general equilibrium link between trade reform and poverty. Four themes emerge. First, “income side effects” appear to dominate “expenditure side effects” on the poor. Second, debates over changes in

summary statistics of the distribution of income or the poverty threshold divert attention away from the identification of potential losers from reform, although we understand why such summary measures are employed. Third, too little attention has been paid to the collection of micro-level data on multiple households, forcing reliance on algorithmic re-balancing methods. Fourth, the empirical specification of household utility functions for the poor has been unduly limited in ways that stop us from examining several important dimensions of poverty, such as health consequences. The good news is that much remains to be done, and the authors think they know how to do much of it.

Paper: “Evaluating the Success of a CGE Model of the U.S.-Canada and North American Free Trade Agreements”

Author: Alan Fox, U.S. International Trade Commission.

Abstract: The author analyzes the performance of the Michigan Model of Production and Trade in simulating the impact of trade liberalization under the North American Free Trade Agreement. Because NAFTA entered into force only part way through the phase-in of the U.S.-Canada FTA accord, it is important to consider their joint impact on the pattern of relative trade flows, production, and employment. Preliminary results suggest that the model performs best when simulating the impact on the already-substantial trade flows between U.S.-Canada and U.S.-Mexico. In other words, the model does not identify new channels of trade that may be made possible from trade liberalization. The *ex post* expansion of certain sectors that had little pre-NAFTA trade highlights the difficulty of using a CES specification.

IMPACTS OF MODEL SPECIFICATION AND PARAMETERIZATION

Results from applied models used to examine trade policy are almost universally sensitive to behavioral parameters. However, the wide range of econometric estimates of these parameters from the literature often leaves modelers with a “best guess.” Because parameter choices affect the quantitative and sometimes qualitative results, this can undermine the validity of modeling results, particularly in many applied models with the Armington structure. The papers in this section discuss whether there are best practices to follow in choosing these key parameters, and what policymakers should know in interpreting analytical results.

Paper: “Estimating Trade Elasticities”

Authors: Hiau Looi Kee, Alessandro Nicita, and Marcelo Olarreaga, World Bank.

Abstract: This paper provides estimates of import demand and export supply elasticities for more than 4200 goods (six digit of the Harmonized System) and around 120 countries. The empirical methodology follows the GDP function approach, which

allows sufficient flexibility in terms of functional forms. Patterns found in the estimated elasticities are discussed.

Paper: “Elasticity Estimation for the U.S. Services Sector”

Author: Jaime Marquez, Federal Reserve, Board of Governors.

Abstract: This paper discusses practical issues that arise in estimating trade elasticities and their role in predicting U.S. external imbalances. The author focuses on the elasticities associated with trade in services because little is known about them. One may be tempted to infer from a thin literature that one can model service trade and merchandise trade in terms of the same forces—income and relative prices—and that knowing the elasticities for merchandise trade is enough to understand the behavior of service trade. Unfortunately, if service and merchandise trade respond to the same forces, then their responses have to differ in magnitude. Otherwise one cannot explain the growing divergences in the balances of service and trade since 1976, balances that were virtually identical to each other for nearly fifty years.

STATE-LEVEL EFFECTS

Members of Congress are increasingly interested in the economic effects of trade policy on their respective geographic areas. The paper in this section presents a state-level model and discusses the capabilities and limitations of such analysis.

Paper: “State-level Dynamic CGE Modeling for Forecasting and Policy Analysis”

Authors: Peter Dixon and Maureen Rimmer, Monash University, Australia.

Abstract: In applied general equilibrium (AGE) modeling there are two broad approaches to generating regional results: bottom-up and top-down. The authors describe both, providing illustrative examples from their experience in Australia. They then describe USAGE, a 500-order dynamic AGE model of the U.S. that the authors are developing in collaboration with the U.S. International Trade Commission. Top-down state results from USAGE will be available in a relatively short time. With a longer time horizon, it will be possible to create a bottom-up version of USAGE. Top-down applications will be adequate for analysis of economy-wide shocks such as changes in Federal policies. Bottom-up modeling will be required for analysis of shocks in which the essence is a change in relative costs across regions.

THE PARTICIPANTS

GRANT ALDONAS

U.S. Department of Commerce

ED BALISTRERI

U.S. International Trade Commission

CHRISTOPHER BLAHA

U.S. Department of Commerce

MARY BOHMAN

Economic Research Service, USDA

SCOTT BRADFORD

Brigham Young and Institute for
International Economics

MEREDITH BROADBENT

Office of the U.S. Trade Representative

DRUSILLA BROWN

Tufts University

MARY BURFISHER

Economic Research Service, USDA

NEIL CONKLIN

Economic Research Service, USDA

LINDA CONLIN

U.S. Department of Commerce

XINSHEN DIAO

IFPRI

PETER DIXON

Monash University, Australia

AZIZ ELBEHRI

Economic Research Service, USDA

MICHAEL FERRANTINO

U.S. International Trade Commission

LIONEL FONTAGNÉ

CEPII

ALAN FOX

U.S. International Trade Commission

JOSEPH FRANCOIS

Erasmus University Rotterdam

KEITH HALL

U.S. Department of Commerce

GLENN HARRISON

University of Central Florida

THOMAS HERTEL

Purdue University

BERNARD HOEKMAN

World Bank

GARY HUFBAUER

Institute for International Economics

KENT HUGHES

Woodrow Wilson Center

DAVID HUMMELS

Purdue University, NBER

SÉBASTIEN JEAN

CEPII

TIMOTHY KEHOE

University of Minnesota and Federal Reserve Bank

WILLIAM KOLARIK

U.S. Department of Commerce

ROBERT KOOPMAN

U.S. International Trade Commission

AART KRAAY

World Bank

SUCHADA LANGLEY

Economic Research Service, USDA

CATHERINE MANN

Institute for International Economics

JAIME MARQUEZ

U.S. Federal Reserve Bank, Board of Governors

WILL MARTIN

World Bank

CHRISTINE MCDANIEL

U.S. Department of Commerce

JONATHAN MENES

U.S. Department of Commerce

WOLFGANG MUNCH

European Commission

GREG POMPELLI

Economic Research Service, USDA

KENNETH REINERT

George Mason University

MAUREEN RIMMER

Monash University, Australia

SHERMAN ROBINSON

IFPRI

TERRY ROE

University of Minnesota

JAMES RUDE

University of Manitoba

AGAPI SOMWARU

Economic Research Service, USDA

DANIEL SUMNER

University of California–Davis

PHILLIP SWAGEL

Council of Economic Advisors

DAVID TARR

World Bank

KAREN THEIRFELDER

The U.S. Naval Academy

STEPHEN TOKARICK

International Monetary Fund

VIVEK TULPULE

ABARE

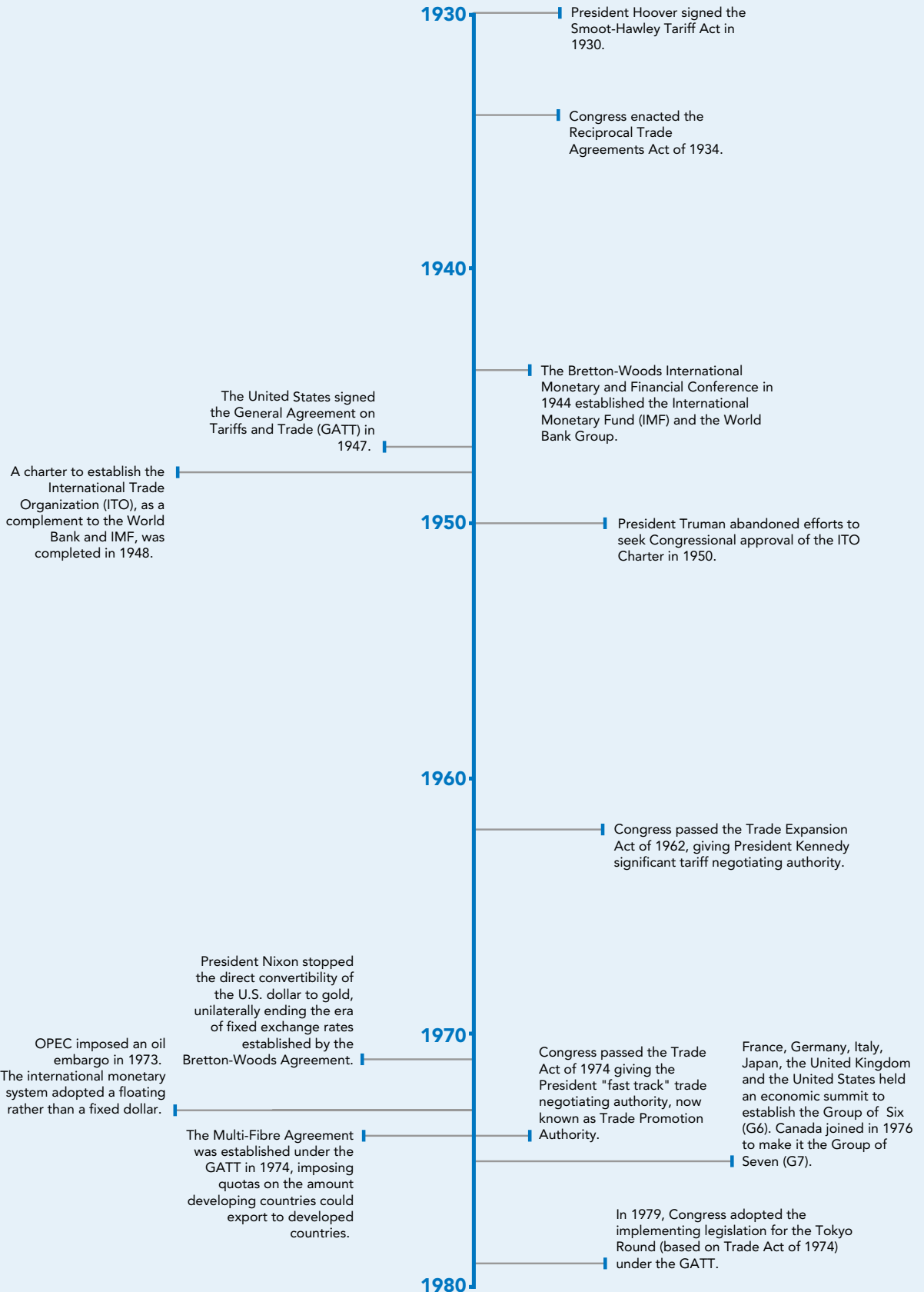
DOMINIQUE VAN DER

MENSBRUGGHE

World Bank

DAVID WALTERS

Office of the U.S. Trade Representative



1980

The Trade and Tariff Act of 1984 became law, which included a free trade agreement with Israel, an extension of the Generalized System of Preferences, and special provisions for the steel industry.

The Omnibus Trade and Competitiveness Act of 1988 was signed into law, which ordered the Executive branch to examine trade with countries that run trade surpluses with the United States.

Members of the GATT launched the Uruguay Round negotiations in Montevideo, Uruguay in 1986.

France, Germany, Italy, Japan, the United Kingdom, and the United States signed the Plaza Agreement to gradually depreciate the U.S. dollar in an effort to reduce the U.S. current account deficit.

Congress approved a Free Trade Agreement (FTA) with Canada.

1990

Congress passed the North American Free Trade Agreement (NAFTA) between the United States, Canada, and Mexico in 1993.

Congress passed the implementing legislation for the Uruguay Round in 1994.

The World Trade Organization (WTO) was established in the Uruguay Round in 1995, superseding the GATT and including a stricter dispute resolution system.

The 1999 WTO Ministerial in Seattle was disrupted by the first large scale demonstrations protesting trade policies and globalization.

2000

Members of the WTO launched the Doha Development Round of multilateral trade negotiations in 2001. Congress approved FTA with Jordan.

Congress passed the Trade Act of 2002, granting the president Trade Promotion Authority.

TPA expired at midnight on July 1, 2007. The Administration awaits Congressional approval of FTAs with Korea, Panama, Peru, and Columbia.

Congress approved U.S.-Bahrain FTA and CAFTA-DR, a free trade agreement with Central America (except for Panama) and the Dominican Republic in 2005.

Congress approved FTAs with Chile and Singapore in 2003.

Congress approved FTAs with Australia and Morocco in 2004.

Several other FTAs are in negotiation, the WTO Doha Round has stalled but not ended negotiations, and others are being contemplated.

The Multi-Fibre Arrangement that had set quotas for trade in apparel was eliminated in 2005. Congress approved a two-year extension of TPA in 2005.

2010



Science, Technology, America, and the Global Economy
Woodrow Wilson International Center for Scholars
One Woodrow Wilson Plaza
1300 Pennsylvania Avenue NW
Washington, DC 20004-3027

WWW.WILSONCENTER.ORG