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EIGHT YEARS OF DOHA TRADE TALKS

Where Do We Stand?

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We commit ourselves to comprehensive negotiations aimed at: substantial improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support. We agree that special and differential treatment for developing countries shall be an integral part of all elements of the negotiations....

—Declaration from the World Trade Organization Ministerial Conference in Doha, Qatar, November 14, 2001

When this declaration was adopted eight years ago, there seemed to be a great deal of enthusiasm about this highly ambitious program. Today the mood has changed, and while concluding the negotiations may still be an achievable goal, it is clouded with uncertainty.

HOW THE NEGOTIATIONS BEGAN

The Doha Round of World Trade Organization (WTO) trade negotiations was launched within a special political context: after the events of September 11, 2001, the international community felt a need for multilateral cooperation. Policymakers saw a world of free trade as the right answer to the poverty that feeds terrorism. At the time, U.S. President George W. Bush said, "By expanding trade, we spread hope and opportunity to the corners of the world, and we strike a blow against the terrorists who feed on anger and resentment." Benjamin Mkapa, the president of Tanzania at the time, said, "It is futile, if not foolhardy to think there is no link between poverty and terrorism."

Failure breeds success

The establishment of a Development Round in Doha seemed to be the right political response following the failure of international cooperation during the 1999 Seattle WTO Ministerial Conference, where developing countries felt their priorities were not being taken into account by multilateral trade negotiations. However, the eight years of negotiations that have followed the establishment of the Doha Round have alternated between failure and success. Although the Cancún Ministerial Conference in September 2003 was characterized by North–South disagreements that split the negotiators and resulted in developing countries rejecting a proposal co-drafted by the European Union and the United States, the Hong Kong Ministerial Conference in December 2005 brought some progress,[1] such as the phasing out of export subsidies and the duty-free, quota-free market access regime provided to least-developed countries by the Organisation for Economic Co-operation and Development (OECD) countries. During a "Mini-Ministerial Meeting" organized in Geneva in July 2008, however, the negotiations failed, in part due to a dispute between the United States and India on safeguard mechanisms in agriculture. Despite this failure, WTO Director General Pascal Lamy said, "Looking at what is on the table now, members believe that the Doha Round is still worth fighting for."

World trade changes, but the principles of negotiation do not

From the outset, the negotiations have been complicated. Cutting a deal between 143 countries (153 today) is a rather difficult task, since the world trading system is based on the combination of multilateral regime with numerous regional agreements and preferential schemes, the latter being eroded by any WTO deal. In addition, trade distortions are concentrated in the agricultural sector. For a long time, a handful of rich countries have resisted international pressure to liberalize this sector, which would benefit net food-exporting countries.

But beyond this, world trade and the world economy have changed profoundly since 2001. WTO members such as Brazil, India, and the recently integrated China have emerged as major trading and economic powers. Their share in world merchandise exports jumped from 4.1 percent in 1993 to 7.7 percent in 2003 and to 11.5 percent in 2008, according to the WTO website. Together with South Africa, they are

[1] The Hong Kong Ministerial Conference built upon the July 2004 package, which stimulated the negotiations after the Cancún failure.

BOX 1—HIGHLIGHTS

- In 2001 the World Trade Organization launched a highly ambitious program of multilateral liberalization. Eight years later, concluding the negotiations remains uncertain, though an opportunity still exists.
- From the onset, the negotiations were complicated due to the high number of participants and trade regimes.
- Since 2001, many proposals have been brought to the negotiating table by the European Union, the United States, and the G-20. Because it is politically and economically acceptable to many parties, the final December 2008 package could be the basis of an agreement.
- An evaluation of these various proposals shows that trade negotiations have been following country-strategic interests. For instance, in eight years, the agricultural market access tariff-reduction formula has grown more ambitious, but additional flexibilities have offset delivered market access.
- The December 2008 package would reduce average tariffs by 27 percent. This has to be compared to the 29-percent reduction involved in the Harbinson and Girard proposals of 2003 and to the 49-percent reduction in world protection of a very ambitious 2005 U.S. proposal. Both the G-20 and the EU proposals from 2005 were intermediate, with a cut in average applied tariffs of around 36 percent.
- The December 2008 proposal implies a reduction of agricultural protection by 6 percentage points in high-income countries and 0.5 percentage points in middle-income countries. Had the U.S. proposal been applied, these figures would have been 12.4 and 4.7, respectively; had the G-20 proposal been applied, the figures would have been 8.9 and 1.2, respectively.
- Different scenarios imply losses for least-developed countries, reflecting eroded preferences and rising terms of trade for imported commodities (including food products).
- Under the December 2008 proposal, the protection faced by the agricultural exports of least-developed countries declines by 2.3 percentage points, while it falls by 4.6 percentage points for high-income countries. These figures are respectively 2.9 and 10.2 under the U.S. proposal, and 2.7 and 5.6 under the EU proposal.
- Duty-free, quota-free market access given by rich countries to poor ones could boost the benefits from trade liberalization for the poorest, especially if it does not include product exemption and if the number of preference-giving countries is increased.
- South–South trade improvements will be limited in the Doha Agreement due to generous flexibilities, which allow developing countries to maintain high levels of protection.
- A very positive impact of the Doha Development Agenda is that it would reinforce binding commitments and reduce existing bound duties while also consolidating the unilateral preferences granted to least-developed countries into the multilateral framework.

members of the G-20 coalition, which has become a major player in the WTO negotiations. Thus, the negotiations are no longer the reserved domain of the European Union and the United States. In addition, the recent financial and economic crisis has affected economic growth worldwide and especially in developing countries, which have been facing declining demand for their exports, decreasing financial flows, and reduced remittances. The crisis has also raised the fear of renewed protectionism and has highlighted the need to have a secure and stable trading environment.

Also, the long-term volatility of world agricultural prices has increased since 2001, so the international community is now much more concerned with potential imbalances of world agricultural markets. And, finally, environmental issues are receiving higher priority. In particular, food supply-and-demand issues resulting from climate change can make international trade a necessity.

All these issues have raised expectations for international cooperation. However, the WTO is an international institution concerned only with international trade; it does not have a mandate regarding development or the environment. It operates on several key principles, which have remained unchanged despite the changing trade and economic environment:

> **Global agreement:** WTO negotiations are based on a "take-it-or-leave-it" principle whereby members must agree to the entire agreement, rather than parts of it.

Unanimity: The agreement must be accepted by all WTO members, which means it must be flexible.

Harmonization of trade distortions: The bigger the trade distortions, the more they have to be cut—especially tariffs and domestic subsidies; this principle is applied via a tiered formula for agricultural tariffs and a Swiss formula in industry.[2]

Special and differential treatment: The WTO fully recognizes the economic heterogeneity of its members and concedes that no commitment is required from least-developed countries and less commitment is expected from middle-income countries. This means smaller rate cuts for tariffs and subsidies and longer implementation periods.

Many proposals, but still no deal

Since 2001, many proposals have been brought to the negotiating table. In 2003, two proposals—the Harbinson and Girard proposals—were submitted to the WTO members. The Harbinson proposal focused on agriculture and included a tiered formula that was supposed to reflect a potential consensus. The Girard proposal, on the other hand, focused on industry and included a "modified Swiss formula" under which tariffs were harmonized with a corrective parameter depending on the initial average (this formula was especially favored by India, which had particularly high tariffs at that time).

Just before the Hong Kong Ministerial Conference in December 2005, the main negotiating parties submitted their own proposals, which included different versions of tiered formulae in agriculture concerning import tariffs and domestic subsidies and the Swiss formula in industry with special and differential treatment. The United States made the most aggressive proposal. The G-20 proposal included an ambitious liberalization program for developed countries with a more limited one for developing countries. The European Union proposal included a more protectionist aspect for developed countries while preserving the main objectives of the Harbinson proposal.

In eight years of negotiation, the various positions have evolved and converged, as represented by the December 2008 chairs' proposals. Market-access modalities have reached a high level of sophistication. The general philosophy is simple, with progressive tariff-cut formulas for both agricultural and nonagricultural goods. Much flexibility has been introduced, however, with different degrees of special and differential treatment and special provisions for tariff escalation, tropical products, and long-standing preferences. A duty-free, quota-free market access initiative for least-developed countries is to be provided by OECD countries, with a 3-percent exemption clause in terms of products. Export subsidies are to be phased out by 2013 for developed countries. Regarding domestic support, this package includes a harmonizing cut in overall trade-distorting support, as well as sectoral disciplines.

A QUANTITATIVE ASSESSMENT OF THE EVOLUTION OF THE NEGOTIATIONS MODALITIES ON PROTECTION, TRADE, AND WELFARE

In order to develop a better understanding of how the negotiations have evolved and to assess if they have converged toward a particular position, it is worthwhile to evaluate the five negotiating proposals discussed earlier: (1) the December 2008 package (called the 2008 scenario), (2) the proposals submitted by the European Union (called the EU scenario), (3) the G-20 proposal (called the G-20 scenario), (4) the U.S. proposal at the time of the Hong Kong Ministerial Conference (called the U.S. scenario), and, finally, (5) a combination of the Harbinson proposal in agriculture and the Girard proposal in industry, both submitted in 2003 (called the Harbinson and Girard scenario). (See Box 1 for technical details.)

The impact on applied protection

Table 1 shows the impact of these different proposals on average applied tariffs. The latest modalities scenario (column 5) would reduce world protection by 26 percent, from 4.5 percent to 3.3 percent. By comparison, the U.S. proposal (column 4) would have cut this world average by 49 percent, while the European Union proposal would have implied a reduction of only 37 percent.

Given numerous flexibilities, world agricultural protection would be reduced by 25 percent (a smaller reduction than would be found in industry) if the December 2008 package were to be implemented, while it would decrease by 57 percent under the U.S. proposal. Concerning agricultural market access, the latest modalities scenario would cut applied protection by a little more than one-third for high-income

[2] The tiered formula means that tariffs are cut through a certain reduction coefficient depending on their level in an interval: tariffs from *x* percent to *y* percent will be reduced by *z* percent. The Swiss formula means that tariff t_0 will be reduced to t_1 with: $t_1 = a \cdot t_0 / (a + t_0)$ with $a>0$. This formula implies that the higher the tariff, the bigger the cut. The reduction is more pronounced when a is small, since the formula ensures that $t_1<a$. Let us note that the Uruguay Round used different principles with fewer constraints in the formula approach in some areas, for example, average cuts for agriculture and target cuts in manufacturing sectors.

countries (from 17.6 percent to 11.6 percent) and by less than 3 percent for middle-income countries (from 18.7 percent to 18.2 percent). This should boost developing-country exports to developed countries.

Table 2 illustrates to what extent foreign-market access is improved under each scenario. The latest modalities scenario improves market access for high-income countries by 25 percent, for middle-income countries by 29 percent, and for least-developed countries by 37 percent. In agriculture, the gains are equivalent for the three groups of countries: around 25 percent.

Therefore, under the Doha Development Agenda, least-developed countries would improve their access to foreign markets but would also suffer an erosion of preferences, especially in agriculture; the protection faced by their agricultural exports declines by 2.3 percentage points, while it falls by 4.5 percentage points for high-income countries and 4.3 percentage points for middle-income countries.

Table 3 indicates, by groups of countries, the potential impact of various scenarios on the volume of exports and real income. World real income would improve by a mere 0.09 percent—about US$70 billion as annual gain in 2025—under the latest modalities scenario, and by 0.24 percent under the U.S. scenario. Overall, global exports will increase by 2 percent. This reflects the modest but positive ambition of the current modalities. Interestingly, the welfare outcome is close to the 2003 starting point. Although the current tiered formula in agriculture is more aggressive compared to the Harbinson proposal, the additional flexibilities granted more than compensate for the stringent coefficients (agriculture exports increase by 5.4 percent compared to 5.6 percent in the Harbinson and Girard proposal). This illustrates the dilemma of the negotiations: trying to reach a high degree of ambition with a challenging formula, but still undermining it with flexibilities to make it politically acceptable.

Taking into account that our modeling assumptions are conservative[3] and we do not include some nontariff barriers, liberalization in services, or some dynamic aspects of trade liberalization, these gains are at least positive for nearly all countries and equal about 20 percent of the gains from total trade liberalization. They also lay the groundwork for future liberalization by reducing the existing binding overhang. A much more politically challenging approach based on the U.S. proposal would lead to gains equaling half of what would result from full trade liberalization.

These results illustrate how far trade negotiations have evolved while constrained by defensive interests. For example, in terms of applied protection, the implementation of the

TABLE 1—IMPACT OF FIVE LIBERALIZATION PROPOSALS ON WEIGHTED AVERAGE TARIFFS APPLIED (IN %)

		Baseline	Harbinson and Girard (2003)	G-20 (2005)	EU (2005)	US (2005)	Latest modalities (2008)
All goods	*All WTO countries*	4.5	3.2	2.8	2.9	2.3	3.3
	High-income countries	3.3	1.8	1.5	2.0	1.5	2.1
	Middle-income countries	8.6	7.5	7.2	5.7	4.8	7.5
AMA	*All WTO countries*	17.8	13.4	11.0	12.3	7.6	13.4
	High-income countries	17.6	11.9	8.7	10.9	5.2	11.6
	Middle-income countries	18.7	17.7	17.5	16.5	14.0	18.2
NAMA	*All WTO countries*	3.6	2.4	2.2	2.2	2.2	2.6
	High-income countries	2.3	1.1	1.0	1.4	1.4	1.4
	Middle-income countries	7.7	6.6	6.3	4.8	4.8	6.6

Source: MAcMapHS6 version 2 and authors' calculation. Reference group weights. We considered only trade between WTO members.
Note: High-income and middle-income countries are based on the World Bank classification (and differ from the WTO classification). LDCs are excluded from the table since they do not apply tariff reductions. AMA and NAMA stand for agricultural and nonagricultural market access, respectively.

[3] In particular, if we compute tariff reductions at a product level, we "plug" them into our computable general equilibrium model using a fixed weighted average. Recent works using a better aggregator, which captures the full effect of the harmonizing formula, show that we may underestimate the total gains from the Doha Round by one-third to one-half. However, some small and vulnerable countries may still need special attention. See Laborde, D., W. Martin, and D. van der Mensbrugghe. 2009. *Implications of the 2008 Doha Draft Agricultural and Nonagricultural Market Access Modalities for Developing Countries*. World Bank Working Paper. Washington, D.C.: forthcoming.

TABLE 2—IMPACT OF FIVE LIBERALIZATION PROPOSALS ON WEIGHTED AVERAGE TARIFFS FACED BY EXPORTS (IN %)

		Baseline	Harbinson and Girard (2003)	G-20 (2005)	EU (2005)	US (2005)	Latest modalities (2008)
All goods	*All WTO countries*	4.5	3.2	2.8	2.9	2.5	3.3
	High-income countries	4.7	3.3	3.0	2.9	2.6	3.5
	Middle-income countries	4.2	2.8	2.5	2.7	2.4	3.0
	LDCs	3.0	1.9	1.4	1.3	1.3	1.9
AMA	*All WTO countries*	17.8	13.4	11.0	12.3	7.6	13.4
	High-income countries	17.6	13.2	10.9	12.1	7.4	13.1
	Middle-income countries	18.4	13.9	11.3	13.0	7.9	14.1
	LDCs	9.3	8.3	7.0	6.6	6.4	7.0
NAMA	*All WTO countries*	3.6	2.4	2.2	2.2	2.2	2.6
	High-income countries	3.8	2.7	2.4	2.3	2.3	2.9
	Middle-income countries	3.1	1.9	1.8	1.9	1.9	2.1
	LDCs	2.2	1.2	0.8	0.7	0.7	1.3

Source: MAcMapHS6 version 2 and authors' calculation. Reference group weights. We considered only trade between WTO members.
Note: High-income and middle-income countries are based on the World Bank classification (and differ from the WTO classification).
AMA and NAMA stand for agricultural and non-agricultural market access, respectively.

TABLE 3—IMPACT OF FIVE LIBERALIZATION PROPOSALS ON VOLUME OF EXPORTS AND REAL INCOME (ANNUAL CHANGES BY 2025)

		Full liberalization	Harbinson and Girard (2003)	G-20 (2005)	EU (2005)	US (2005)	Last modalities (2008)
World exports of goods and services	US$ Billions	1,934	400	502	527	621	326
	Variation (%)	11.6	2.4	3.0	3.2	3.7	2.0
Agriculture and agro-food	US$ Billions	409	47	92	60	152	45
	Variation (%)	49.0	5.6	11.0	7.2	18.1	5.4
Manufacturing goods	US$ Billions	1,517	350	405	465	466	276
	Variation (%)	11.6	2.7	3.1	3.6	3.6	2.1
Real income	US$ Billions	384	66	134	126	190	69
	Variation (%)	0.49	0.08	0.17	0.16	0.24	0.09
	High-income countries (%)	0.51	0.08	0.17	0.19	0.25	0.09
	Middle-income countries (%)	0.43	0.10	0.17	0.09	0.22	0.09
	Least-developed countries (%)	-0.67	-0.32	-0.29	-0.01	-0.27	-0.10
Standard Deviation of the real income gains		0.98	0.29	0.45	0.35	0.51	0.22

Source: MIRAGE model simulations
Note: High-income and middle-income countries are based on the World Bank classification (and differ from the WTO classification).

December 2008 package would decrease agricultural protection in rich countries by about as much as the Harbinson and Girard proposal would and by even less than the 2005 EU proposal would. The application of the U.S. proposal in this domain would result in a much more ambitious liberalization of world agriculture. Regarding nonagricultural market access, a Doha agreement defined by these modalities would result in the liberalization of the economies of middle-income countries by about as much as was expected under the Harbinson and Girard and the G-20 proposals, while the application of the 2005 EU proposal would have liberalized these sectors much more. Again defensive interests are respected. This selection of the smaller common denominator is translated into the trade changes: the highest increase in nonagricultural exports (about 3.6 percent, from the EU and U.S. proposals) and agricultural trade (between 11 and 19 percent, from the U.S. and G-20 proposals) is avoided and smaller increases are achieved (2.1 percent for manufacturing goods and 5.4 percent for agriculture and the agrifood sector).

More important, different scenarios imply losses for least-developed countries, reflecting eroded preferences as a result of a multilateral agreement and rising terms of trade for imported commodities, including food products. While these losses are significant in the cases of the Harbinson and Girard, G-20, and U.S. proposals, they are almost nonexistent as far as the EU proposal is concerned, while being quite small under the December 2008 proposal. It is important to remember that the last two scenarios include a duty-free, quota-free initiative given by OECD countries to least-developed countries while the other scenarios do not.

Finally, by reducing the losses of the weakest economies but also limiting the gains of the main winners, the long negotiation process has reduced the unevenness of the gains (see the simple standard deviation in the last row of Table 3).[4]

LEAST-DEVELOPED COUNTRIES: WHAT IS ON THE PLATE?

Obviously, potential gains for least-developed countries are zero and could even be negative given our conservative modeling assumptions. As a result, more is needed to address their concerns. Even if we consider that this modeling exercise underestimates the impact of the Doha agreement on least-developed countries, potential gains are small. Duty-free, quota-free market access given by OECD countries to least-developed countries could boost the benefits from trade liberalization for the poorest WTO members. But its benefits are likely to be drastically reduced by the exclusion of 3 percent of products. This access has to be redesigned with no product exemption and a larger number of granting countries, in particular dynamic emerging economies: Brazil, China, and India.[5] It is also worthwhile to consider that small and vulnerable countries may receive this new preference as a compensation for traditional preferences eroded by the potential agreement.

Aid for trade is also a major component of the agreement. Some observers describe this initiative as financial compensation for countries that are expected to suffer losses under the agreement; how negative outcomes for LDCs could be addressed a bit further by aid for trade is a key topic that could be the focus of a specific evaluation.[6] The initiative helps developing countries "*to increase their capacity to take advantage of more open markets*"[7] by investing in trade-related infrastructure such as transportation and telecommunication, the impact of which has proven positive for export performance.[8]

In other words, the Doha agreement, based on the most recent modalities package, has an ambivalent impact on developing countries and does not offer enough to the poorest countries. It has to offer more in terms of market access and reduced trade costs. International cooperation needs to be extended further to other challenging areas for least-developed countries.

Food crisis threatens the meager gains of least-developed countries

Since the end of the food crisis, the role that international trade can play in food security has generated a great deal of debate. Food security implies availability of food products on domestic markets at an affordable price for local consumers. This concept is quite different from the notion of national self sufficiency. Trade has always been used to compensate for a mismatch between supply and demand among countries. It helps increase supply and reduce the domestic price for importing countries, and reduce volatility, especially in the most common case where price volatility is due to supply shocks.

However, greater international cooperation is needed to eliminate national policies that can substantially increase world agricultural prices. For example, the role of biofuel

[4] These results are in line with our previous analysis in Bouët, A., and D. Laborde. 2009. *Why is the Doha Development Agenda failing? And what can be done? A computable general equilibrium–game theoretical approach*. IFPRI Discussion Paper 877. Washington, D.C.: International Food Policy Research Institute.

[5] See Berisha, V., A. Bouët., D. Laborde, and S. Mevel. 2008. *The Development promise: Can the Doha Development Agenda deliver for least-developed countries?* IFPRI Note 14. Washington, D.C.: International Food Policy Research Institute.

[6] Stiglitz, J., and A. Charlton. 2006. Aid for Trade. Report for the Commonwealth Secretariat. Paper presented at the Initiative for Policy Dialogue conference "An Assessment of the Doha Round after Hong Kong," February 2-3, Columbia University, New York.

[7] www.wto.org/english/tratop_e/dda_e/background_e.htm.

[8] Bouët, A., S. Bora, and D. Roy. 2007. *The marginalization of Africa in world trade*. IFPRI Research Brief 7. Washington, D.C.: International Food Policy Research Institute.

policies in the food crisis has been discussed; it obviously implies more demand for agricultural commodities and has been driven by questionable subsidies and tax-rebate policies.

The export taxes are attractive instruments for policymakers, especially in the case of rising international agricultural prices; they imply a reduction in domestic agricultural prices, which benefits local consumers, and an increase in the international prices of goods that the country exports, as well as new public revenues. The use of export taxes is not regulated by the WTO.[9] But they are typically "beggar-thy-neighbor" policies that contribute to further increases of world agricultural prices resulting from other shocks.

Therefore, the WTO has to tackle these issues by bringing under its regulatory umbrella policies that deeply hurt international trade and small net food-importing countries.[10] Otherwise, importing countries will resort to protectionist tools (such as special products and special safeguard mechanisms) to avoid depending on foreign, and sometimes unreliable, suppliers for achieving food-security targets.

Economic crisis threatens the meager gains of least-developed countries

The recent economic crisis has clearly illustrated how much developing countries are dependent on the economic growth of rich countries. With falling economic activity, rich countries' imports have dropped drastically, translating into lower exports and economic activity for developing countries. This result is highly dependent on the current shape of trade flows and the fact that developing economies still face high barriers on developing markets that impede South–South trade. The Doha Development Agenda will partially address this issue. Using our computable general equilibrium model, we simulate a 7-percent reduction in the Gross Domestic Product of OECD countries during the period 2023-2025, with and without a Doha Development Agenda. Without the WTO deal, middle-income countries will suffer a reduction in their real income of 0.2 percent, whereas with the Doha Development Agenda, this loss is cut in half. On the other hand, the loss increases slightly from 0.4 to 0.5 percent for least-developed countries. This is due to the fact that the duty-free, quota-free initiative granted by OECD countries to least-developed countries will reinforce their dependence on these markets. Therefore, it is very important that the initiative include as many emerging economies as possible to help diversify the exports of least-developed countries.

However, South–South trade improvements will be limited in the Doha Agreement due to generous flexibilities for developing countries and will not lead to a significant reorientation of developing countries' exports. The right complement could be to reduce flexibilities that affect South–South trade, expand regional agreements among developing countries, and increase investment in trade-related infrastructure adapted to this type of trade.

Renewed protectionism could threaten the meager gains of least-developed countries

The economic crisis has multiplied fears of renewed protectionism. A positive impact of the Doha Development Agenda is that it would reinforce binding commitments and reduce existing bound duties and would also consolidate the unilateral preferences granted to least-developed countries into the multilateral framework. By so doing, it would provide an international public good by making the trade environment more secure and decreasing the costs associated with potential trade wars.

In a recent study,[11] we examined this idea by comparing the application of bound duties based on their current levels, as they have been negotiated by the Uruguay Round, to the same policy based on the level of bound duties implied by the most recent Doha Development Agenda modalities. If the Doha Development Agenda is not implemented, current protection would double when countries resort to bound levels, whereas protection would increase by only 41 percent if the Doha Development Agenda were to be implemented. This difference is worth up to US$809 billion in terms of trade volume and US$184 billion in terms of real income (in 2025).

Strikingly, these conclusions are especially true for poor countries. In terms of real income, if one considers that the real value of the Doha Development Agenda is measured by the preventive role that it plays, from a global value of US$184 billion, US$128 billion (about two-thirds) represents the benefits to developing countries.

CONCLUDING REMARKS

In conclusion, although the Doha Development Agenda may be considered an agreement that is constrained too much by defensive protectionist interests, it still represents the achievement of significant liberalization. Some of the gains that the Doha Development Agenda could provide are indirect through binding duties. Therefore concluding the Round quickly will help to grasp the gains within reach. In particular, we have shown that eight years of negotiations have managed to get a more even outcome that respects countries' strategic

[9] Quantitative export restrictions are ruled out under the General Agreement on Tariffs and Trade Article XI.
[10] Bouët, A., and D. Laborde. 2009. *The Economics of export taxation: A theoretical and CGE contribution*. IFPRI Discussion Paper. Washington, D.C.: forthcoming.
[11] Bouët, A., and D. Laborde. 2009. Assessing the potential cost of a failed Doha, *World Trade Review*, forthcoming.

interests, but the negotiations have not been permitted to go further than the ambition of the 2003 proposals. Nevertheless, the gains it would provide to least-developed countries are insubstantial, if not nonexistent or even negative for some countries. These benefits could be improved with a new effort on the part of rich and emerging countries, in terms of improved market access and other transaction costs. It would make the Doha Round a real Development Round.

A TECHNICAL NOTE ON HOW THE SCENARIOS HAVE BEEN EVALUATED

These assessments have been carried out using the Modeling International Relationships in Applied General Equilibrium (MIRAGE) Computable General Equilibrium model of the world economy with protection data coming from the MAcMapHS6 database.

As in previous works (www.ifpri.org/book-5076/ourwork/program/mirage-model), we assume perfect competition across all sectors. Based on standard and robust assumptions, it should be noted that the model may underestimate the positive effects of trade reform, particularly when such reform drives new investments, technology improvements, or important trade or production diversification.

Tariff reductions

Tariff reductions are applied at the six-digit level of the harmonized system on a country-by-country basis using the MAcMapHS6 version 2 database.[12] We explicitly take into account differences between bound, applied most favored nation, and preferential tariffs. Ad valorem equivalent of specific tariffs are computed based on the WTO guidelines for the implementation of tariff cut formulas. All sensitive and special products are selected using the Jean, Laborde, and Martin political economy criterion.[13]

The first scenario (Harbinson and Girard) is based on 2003 proposals from the WTO chairs: the Harbinson proposal for agricultural market access (TN/AG/W/1, WTO 2003) and the Girard proposal (TN/MA/W/35, WTO 2003) for nonagricultural market access. The agricultural market access tariff reduction includes a tiered formula with three bands for developed countries and four for developing countries. Inside each band, flexibility is allowed: for each tariff line, negotiators can choose the rate cut under two constraints: a minimal rate cut specific to each band, and the simple average cut over all products for each band. We use the Jean, Laborde, and Martin criterion to define the optimal behavior of each country inside each band. We also assume 10 percent of "special" products for developing countries for which the rate cut is limited to 5 percent. The nonagricultural market access proposal (which supposedly reflects the Girard proposal) is based on a Swiss-like formula where the "Swiss coefficient" is equal to the simple average base rate times a scale coefficient (equal to 1 for developed economies and 1.5 for developing countries). For unbound lines, the base rate is equal to the most favored nation rate times 2, with a minimum of 5 percent. Countries that have a binding coverage below 35 percent do not reduce their tariffs.

We complete the next three scenarios, based on pre-Hong Kong 2005 ministerial proposals, with the 2004 July package when needed.

The second scenario is the G-20 proposal. For agricultural market access, we rely on the G-20 proposal on market access of October 2005. This includes a tiered formula (4 bands for both developed and developing countries with differentiated thresholds and coefficients and a capping for highest tariffs at 100 percent for developed economies and 150 percent for developing economies). We allow for 4 percent of sensitive products for developed countries (6 percent for developing countries) with a 30-percent deviation from the formula cut (45-percent deviation for developing countries). We also include 5 percent of special products for developing countries with no cut. The nonagricultural market access component is based on the Argentina, Brazil, and India communication (TN/MA/W/54, WTO 2005). It is similar to the Girard formula but includes a differentiated formula for bound and unbound lines. We assume the same scale coefficients as in the Harbinson and Girard scenario as well as the binding mark-up to compute the base rate on unbound lines. In addition, we consider 5 percent of tariff lines (max. 5 percent of imports) with no cut.

The third scenario represents the European Union's contribution of October 2005. Agricultural market access is described by a tiered formula (four bands) similar to the G-20 proposal but with lower reduction target for developed countries. In addition, the lower band (tariffs between 0 and 30 percent) allows flexibility by defining a simple average cut target and lower

(continued on page 10)

[12] Boumellassa, H., D. Laborde, and C. Mitaritonna. 2009. *A consistent picture of the protection across the world in 2004: MAcMapHS6 version 2*. IFPRI Discussion Paper 903. Washington, D.C.: International Food Policy Research Institute.
[13] Jean, S., D. Laborde, and W. Martin 2008. *Choosing sensitive agricultural products in trade negotiations*. IFPRI Discussion Paper 788. Washington, D.C.: International Food Policy Research Institute.

and upper bound tariff reductions. Eight percent of sensitive products (50 percent deviation from the formula) are authorized for developed countries (one-third additional sensitive products are allowed for developing countries). For nonagricultural market access, we use a Swiss formula with coefficient 10 for developed economies and 15 for developing countries. The base rate of unbound tariff lines is equal to the applied most favored nation rate plus 10 percent. Five percent of sensitive products (maximum 5 percent of imports) are not cut. A 100 percent duty-free, quota-free initiative is granted by developed countries to least-developed countries.

The fourth scenario is the U.S. proposal. It includes stronger tariff reduction in agriculture with the same formula approach as the G-20 (scenario 2) and smaller tariff caps (for example, 75 percent for developed countries). Only 1 percent of sensitive products are authorized for developed countries (1.33 percent for developing countries). We apply the same discipline in nonagricultural market access as in the EU proposal (scenario 3).

The fifth scenario is based on December 2008 modalities (scenario 2008). An extensive discussion of this scenario is available in Laborde, Martin and van der Mensbrugghe (2009).[14] The agricultural market access pillar (WTO TN/AG/W/4/Rev.4) includes a tiered formula with four bands and differentiated coefficients for developed and developing countries. We take into account provisions for sensitive and special products as well as the additional cuts delivering special access for tropical products and reducing tariff escalation. For the nonagricultural market access pillar (WTO TN/MA/W/103/Rev.3), we have a Swiss formula with coefficient 8 for developed countries and a menu of options including sensitive products combined to a Swiss formula with coefficients ranging from 20 to 25. We consider the special cases of the recently acceded members, the small and vulnerable economies and the low-binding coverage countries. A 97 percent duty-free, quota-free initiative is included for OECD countries as well as for Brazil and India to some extent.

In all cases, least-developed countries are free from any tariff reduction as well as low-binding coverage countries in nonagricultural market access. We also always implement the consequences of the EU–Turkey Custom Union for nonagricultural market access for the latter countries.

Export subsidies

All export subsidies are removed in all scenarios.

Domestic support

We use a tiered formula to reduce overall trade distorting support (scenario 5) or the total Aggregate Measurement of Support (scenarios 1 to 4). To sum up: in scenario 1, all countries belong to the same band and the reduction rate is 50 percent. For other scenarios, the EU is in the last band and the reduction rate applied to its support is 80 percent under the G-20 proposal and 2008 modalities, 70 percent under the EU proposal, and 83 percent under the U.S. proposal. For the United States (second band), the rate cut is 70 percent under the G-20 proposal and 2008 modalities, and 60 percent under the EU and U.S. proposals. Domestic support reductions are applied in a dynamic way as described in Bouët and Laborde (2009) with an additional assumption of 2 percent annual inflation rate.

[14] Laborde, D., W. Martin, and D. van der Mensbrugghe. 2009. *Implications of the 2008 Doha Draft Agricultural and Nonagricultural Market Access Modalities for Developing Countries*. World Bank Working Paper. Washington, D.C.: World Bank, forthcoming.

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