Staff Papers Series

Staff Paper P84-21

June 1984

North American Grain

Production in World Affairs

by

G. Edward Schuh

Department of Agricultural and Applied Economics

University of Minnesota
Institute of Agriculture, Forestry and Home Economics
St. Paul, Minnesota 55108

North American Grain Production in World Affairs

by

G. Edward Schuh*

*Professor and Head, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, Minnesota

Staff papers are published without formal review by the Department of Agricultural and Applied Economics

Draft

NORTH AMERICAN GRAIN PRODUCTION IN WORLD AFFAIRS*

G. Edward Schuh and Harlan Cleveland**

When we originally developed the North American granary project we conceived of the granary as including the U.S. corn and wheat belts and the Canadian wheat belt. Geographically, these agricultural regions constitute the heartland of the North American continent. Economically, they are an important source of foreign exchange for both countries. And politically, the regions represented by the grain regions are important in both countries.

There are three major grain crops produced in the Granary: corn, wheat, and soybeans. Each of these is significant on the U.S. side (see Tables 1 and 2); only wheat is of major significance on the Canadian side, but oilseeds (rape, flax, and soybeans) should also probably be included on the Canadian side (Tables 3, 4, and 5). In characterizing these "grains," it is important to note that one is a food grain, another is a feed grain, and the third is a combination of the two: soybeans are used to produce soybean meal that is feed for the livestock sector and vegetable oils that are used directly in human consumption. But soybeans and soybean products are used for direct human consumption both here and abroad.

---

*Presented at Conference on "The Future of the North American Granary: Adjusting to Change in an International Setting," Saint Paul Hotel, St. Paul, Minnesota, June 17-19, 1984.

**G. Edward Schuh is Professor and Head, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul. Harlan Cleveland is Director, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, Minneapolis.

Table 1

Share of Value of Total U.S. Agricultural Output Held by Major Grains

Statistic	1978	1979	1980	1981	1982
Wheat %	4.2	5.9	6.3	6.9	6.8
Corn %	7.3	7.8	10.0	9.0	9.3
Soybeans %	10.5	9.9	10.1	8.6	8.6
TOTAL %	22.0	23.6	26.4	24.5	24.7

Sources: (1) Selected Agricultural Statistics, Canada and the Provinces, 1983 Agriculture Canada.

(2) Canada's Trade in Agricultural Products, various issues Agriculture Canada.

(3) Statistical Abstract of the U.S., 1984, U.S. Department of Commerce, Bureau of the Census.

(4) Agricultural Outlook, various issues, USDA.

Table 2

Share of Value of Total U.S. Agricultural Exports Held by Major Grains

Statistic	1978	1979	1980	1981	1982
Wheat Exports %	15.6	16.1	16.3	18.7	18.9
Corn Exports %	18.0	20.2	20.6	18.2	15.3
Soybean Exports % (includes meal and oil)	23.8	22.8	20.1	19.2	22.1
TOTAL %	57.4	59.1	57.0	56.1	56.3

Sources: (1) Selected Agricultural Statistics, Canada and the Provinces, 1983 Agriculture Canada.

(2) Canada's Trade in Agricultural Products, various issues Agriculture Canada.

(3) Statistical Abstract of the U.S., 1984, U.S. Department of Commerce, Bureau of the Census.

(4) Agricultural Outlook, various issues, USDA.

Table 3

Share of Value of Total Canadian Agricultural Output Held by Major Grains

Statistic	1978	1979	1980	1981	1982
Wheat %	15.0	16.5	20.2	23.5	21.3
Corn %	1.6	1.6	2.3	2.5	2.1
Oilseeds % (flax, rapeseed and soybeans)	6.9	7.4	6.7	4.7	4.7
TOTAL %	23.5	25.5	29.2	30.7	28.1

Sources: (1) Selected Agricultural Statistics, Canada and the Provinces, 1983 Agriculture Canada.

(2) Canada's Trade in Agricultural Products, various issues Agriculture Canada.

(3) Statistical Abstract of the U.S., 1984, U.S. Department of Commerce, Bureau of the Census.

(4) Agricultural Outlook, various issues, USDA.

Table 4

Share of Value of Total Canadian Agricultural Exports Held by Major Grains

Statistic	1978	1979	1980	1981	1982
Wheat Exports %	40.0	36.2	49.6	42.4	46.0
Corn Exports %	1.1	0.4	1.7	2.5	1.2
Oilseed Exports % (flax, rapeseed and soybeans)	11.4	14.3	8.3	9.1	7.0
TOTAL %	52.5	50.9	59.6	54.0	54.4

Sources: (1) Selected Agricultural Statistics, Canada and the Provinces, 1983 Agriculture Canada.

(2) Canada's Trade in Agricultural Products, various issues Agriculture Canada.

(3) Statistical Abstract of the U.S., 1984, U.S. Department of Commerce, Bureau of the Census.

(4) Agricultural Outlook, various issues, USDA.

Table 5

Share of Value of Canadian Wheat Exports as a Percentage of Total Value of Canadian Wheat Output (includes exports of carryover stocks)

1978	1979	1980	1981	1982
106.1	92.3	120.8	84.1	108.2

Sources: (1) Selected Agricultural Statistics, Canada and the Provinces, 1983 Agriculture Canada.

(2) Canada's Trade in Agricultural Products, various issues Agriculture Canada.

(3) Statistical Abstract of the U.S., 1984, U.S. Department of Commerce, Bureau of the Census.

(4) Agricultural Outlook, various issues, USDA.

The significance of these commodities is not limited to their immediate uses, of course, either at home or abroad. The U.S. feedgrain sector supports an enormous livestock sector here in the U.S., and has increasingly been a source of feed material for rapidly growing livestock sectors in other countries. At the margin, of course, wheat is also used as a feed, depending on the relevant price ratios.

Our assignment was to discuss the North American granary in the context of world affairs, and to provide the backdrop against which the two papers that follow can discuss the interactions between domestic and foreign agricultural policy in each of our two countries. One way to look at this problem is in terms of the crude trade flows. From this perspective, what one sees is that the North American granary involves linkages with each of the major political groupings on the international scene, and linkages with each of the major geographic regions of the world (Tables 6 and 7).

The political "noise" emanating from Washington these past years would make one believe our only agricultural trade relations were with the European Community and Japan. However, over the decade of the 1970's our exports of grain and cereals shifted strongly towards the centrally-planned economies and the less-developed countries. As one looks to the future, these are likely to be the markets with growth potential.

There are two important added dimensions to this problem. First, one of the unique developments on the world scene is the emergence of modern poultry industries - based on imported technology - around the major urban centers of the world. These emerging poultry industries tend to be depen-

Table 6

Ranking (by Value) of U.S.
Exports to Importing Regions

Corn

(1) Asia (Japan)
(2) W. Europe
(3) Latin America
(4) E. Europe and USSR
(5) Africa

Wheat

(1) Asia (Japan and China)
(2) Latin America (Brazil)
(3) Africa
(4) E. Europe and USSR
(5) Western Europe

Soybeans

(1) W. Europe
(2) Asia (Japan)
(3) Latin America
(4) E. Europe and USSR
(5) Africa

Source: U.S. Foreign Agricultural Trade Statistical Report, 1983, USDA.

Table 7

Ranking (by Value) of Canadian
Exports to Importing Regions

Wheat

(1) E. Europe and USSR
(2) People's Republic of China
(3) Western Europe
(4) Japan
(5) Latin America (Brazil, Cuba)
(6) Africa (Algeria)

Source: Canada's Trade in Agricultural Products, various issues Agriculture Canada.

dent on imported feed grains, and thus provide a direct link with the North American granary, especially the U.S. side of it. At a somewhat different level, Africa is the one geographic area of the world in which domestic food supplies are not keeping up with domestic demand and in which there is chronic malnutrition and starvation. Food assistance becomes an important linkage between the two countries of the North American granary and this politically and economically important region.

An important maintained assumption behind both this conference and the research and educational project that motivates it is the notion that it makes sense to think about the North American Granary as an entity. It is worth addressing precisely what we had in mind in conceiving of the project and this conference in the way we have. Our starting point was simply to recognize that as a source of imported supplies of grain, the region we have described as the North American Granary has been and likely will continue to be a major source of importable grain supplies for the world economy. Although Canada and the U.S. compete at the margin for those foreign markets, we also share a common set of problems by virtue of being part of an international economy and hence by virtue of suffering the consequences of the vagaries and uncertainties of that international market.

Although competition may be an important theme of our interactions with the rest of the world, we believe that economic cooperation should also be an important theme. This concept, which dominated U.S. policy towards the rest of the world in the immediate post-World War II period, has fallen from use in recent years. We believe it should be resurrected. Part of what we

want to discover from a more careful study of the Granary is the sense in which we will be competing in the years ahead and the sense in which we have opportunities to cooperate. We obviously will compete for markets. But at the same time we have a common interest in strengthening our respective production capability, in establishing a more open trading system in grains, in dealing with the world hunger problem, and in fostering and encouraging economic development in the Third World.

The Changing Structure of the International Economy and Implications for the North American Granary

The international economy and how our respective economies relate to it have undergone dramatic changes during the past 20 years. These changes have changed significantly both the economics and the politics of agriculture - and at both the national and international level. In this section we review these changes and attempt to draw out the major implications for the North American Granary.

1. An increased dependence on trade world-wide

At the end of World War II, most observers of the world scene were pessimistic about the possibilities for international trade. They had witnessed the trauma of the 1930's and the collapse of trade associated with it. They had seen the destruction and chaos of World War II, especially in Europe, the USSR, Japan, and China. They knew the Soviet Union and its satellites would turn inward and try to develop independently of the inter-

national capitalist system. And the less-developed countries either wanted to cut themselves off from their previous colonial masters, or desired in their own right to pursue forced-draft, import-substituting industrialization policies.

The realities of the post-World War II period have been greatly different than that initial prognosis. International trade has grown at a faster rate than world GNP in every year except three since the end of World War II. (Two of those three years were the last two years.) That means that the respective economies of the world have become increasingly dependent on international trade. To use the economic concept, which may be a bit more descriptive, our respective economies have become more open to the vagaries of international trade.

During the 1970's, these changes in the U.S. economy can only be described as dramatic. Those associated with agriculture tended to think it was only our agricultural sector that was becoming more dependent of trade. The truth of the matter, however, is that the dependence on our economy as a whole on trade doubled from 1970 to 1979. Moreover, if one extends the period backward only five more years - to 1965, the dependence of the U.S. economy on trade actually tripled. And as we began the 1980's, about 25 percent of the U.S. GNP was attributed to trade.

One can view this changed position of the United States in a number of different ways. First, the growing dependence on trade takes away a great deal of this nation's political and economic independence. In a sense, this is the sine qua non of the weakening of U.S. hegemony over the international

economy during the post-World War II period. It means that the United States can no longer walk away from its trade problems. It really does need to address them.

The corollary of the U.S. economy being more dependent on international trade is to say the economy has become increasingly open. The significance of this is that a more open economy is increasingly beyond the reach of domestic policies and programs. This failure of domestic policies and programs is an important source of frustration in many countries around the world as national governments try to use policies from an earlier era to influence the changed economy of today. It points to issues that will be addressed more directly below.

2. The emergence of a well-integrated international capital market

At the end of World War II there virtually was no such thing as an international capital market. There were transfers of capital among countries. But for the most part they were on a government-to-government basis and we called it foreign aid. In some cases these transfers were quite significant. For example, at the height of the Marshall Plan the U.S. was transferring the equivalent of over 3 percent of its GNP each year to Europe for reconstruction and development. That was equal to about 5 percent of Europe's GNP.

The Marshall Plan, of course, was successful. U.S. interest then shifted from Europe to the less-developed countries. But foreign assistance for these countries was never on the scale it had been for Europe, although

eventually the countries of Western Europe would do significantly more for the less-developed world in a relative sense than did the U.S.

While foreign assistance declined in relative importance, there emerged a Eurodollar market in Western Europe. This market grew very rapidly, to be followed by the emergence of a Eurocurrency market. Eventually, this emerging international capital market was amplified with petrodollars after the OPEC-induced increase in petroleum prices in 1973 and later in 1979. This international capital market became so extensive that in the early 1980's it is estimated that the total volume of credit outstanding was on the order of $1.7 trillion - approximately the same magnitude as the value of trade. Moreover, almost all countries in the world were using this market in one form or another.

An important implication of the emergence of this market is that it ties the countries of the world together in ways that are every bit as important as international trade. Moreover, as we will note below, it ties the economic policies of countries of the world together, and establishes a firm link between international capital markets and international commodity markets. The debt crisis among selected less-developed countries these last two years has brought these linkages to our attention. But the important linkages go a great deal deeper.

3. The shift from a system of fixed exchange rates to a system of flexible exchange rates

At the Bretton Woods Convention in 1944 the countries of the world agreed to pursue a system of fixed exchange rates. The objective of this

system was to avoid beggar-thy-neighbor competitive devaluations which had characterized the 1930's, and which in the view of many had contributed both to the degree and the extent of the Great Depression. Another objective was to have more stable exchange rates and thus to facilitate international trade.

The United States unilaterally brought this system to a close in 1973 when President Nixon devalued the dollar for the second time, closed the gold window, and said that henceforth the value of the dollar would be determined by the foreign exchange markets. The period which has followed has seen a great deal of instability in exchange rates, although trade has continued to grow.

The main significance of this shift in foreign exchange rate regimes is that it changed the way in which monetary and fiscal policy affects the economy. When there were virtually no international capital markets and we were on a fixed exchange rate regime, the impact of monetary policy was broadly felt in the economy. However, under present arrangements, changes in monetary and fiscal policy have their impact on the economy largely through the exchange rate. Changes in interest rates are reflected in changes in the value of the currency. And these in turn induce changes in the export- and import-competing sectors.

We are left, then, with a grain sector in the North American Granary that is strongly tied to international capital markets and to shifts and turns in both national and international monetary policy. Differences in monetary and fiscal policies between Canada and the United States, for

example, can be imposing opposite adjustments in the respective agricultures of the two countries. This can be a source of conflict between the two countries.

More generally, in today's world, the international capital markets are for the most part driving the system. This is in marked contrast to the world of yesteryear when one could safely assume that a country incurring a large trade deficit would almost certainly suffer the consequence of a decline in the value of its currency. This is no longer the case.

4. Increased monetary instability

At the very time that a link between international capital markets and international capital markets emerged, conditions in international money markets themselves became more unstable. This increased instability dates back to 1968. It matters little for our purposes whether this increased instability is a reflection of unstable monetary policies, or of autonomous shifts in capital flows. The important point is that international commodity markets have become increasingly unstable, largely induced by relatively unstable monetary conditions.[1]

---

[1]For more detail, see Schuh, G. Edward, "Floating Exchange Rates, International Interdependence, and Agricultural Policy," in Rural Change: The Challenge for Agricultural Economists, Proceedings, International Conference of Agricultural Economists, 1979. For an analysis of the sources of this instability, see Robert J. Myers and C. Ford Runge, "Instability in North American Grain Markets I, II, and III: Corn, Soybeans, Wheat," Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, February, 1984, May, 1984.

To conclude this section, it is worth making the following points: (1) the world has become increasingly interdependent through trade; (2) the integration through the international capital market is just as strong and important as integration through the commodity markets; (3) large shifts in exchange rates are noticed almost immediately by participants in the market; and (4) the increased instability in commodity markets during the 1970's is very much of a monetary phenomena and should be treated as such.

The Issues Before Us

In addressing the question of North American grain production in world affairs, we believe there are five main issues:

1. Making more efficient use of the resources in our respective countries.

The U.S. economy is just now recovering from its most severe recession in the post-World War II period. Canada has been experiencing slow growth for a period of years now. In both countries growth and economic development have returned to positions of high priority on the policy-maker's agenda, if for no other reason than to move toward balanced budgets for the Federal government.

Making more efficient use of each nation's resources is dependent on at least two conditions. First, each nation must remain competitive in international markets. Second, efficiency prices must be used within the respective countries. Agriculture and agricultural policy are important on both counts.

Agriculture's role in helping each country to remain competitive on the international scene focuses attention on food as a wage good. Wages become important when considering the ability to compete at the international level, as recent deregulations of the U.S. economy have made clear. That the ability to compete at the international level is an issue is evidenced by the pleas for protection that emanate from almost every sector of the U.S. economy.

Both Canada and the United States have pursued cheap food policies in the sense that they have invested in the production and distribution of new technology to make their respective agricultures the most productive sectors in their economies. At the same time each country has used agricultural policies and programs that raise agricultural prices above what they otherwise would have been, thereby sacrificing some of the gains made on the productivity side. In the case of the United States, the budget costs of such programs for 1983 are now estimated to be on the order of $35 billion - larger than the net farm income of the sector.

In both the U.S. and Canada the share of their budget the average consumer spends on food in so small that the price of food as a wage good may appear to be an irrelevant issue. However, it is not with the average food basket that either country competes internationally. It is with particular industries and particular wage groups. Hence, there is considerable merit in reducing or eliminating those distortions which keep the price of food above what they would otherwise be. In this way workers and low income groups have a larger real income while making it possible to keep nominal

wages low and thereby to improve each country's competitive position in the international economy.

Related to this issue, of course, is the issue of the relative prices for agricultural products. This raises the whole set of questions surrounding commodity programs and commodity policies. Here we want to argue that much of the discussion about commodity policy in both countries falls short of the mark in the sense that it applies first-best efficiency criteria to a sector that is hardly in a first-best situation.

Drawing on U.S. experience, the point is that important sectors of the U.S. economy benefit from sizeable protection. One only need refer to the voluntary export agreements negotiated with exporters of automobiles, steel, textiles, and other goods to appreciate the significance of this protection. Such protection of import-competing sectors raises the relative prices of both importables and home goods, thereby discriminating against the export sectors. In fact, this protection of the import-competing sectors constitutes an implicit tax on the export sector.

In general, efficiency prices for a nation are the border prices they face in international markets. But once there are distortions in the economy such as protection of the import-competing sectors, the theory of the second-best argues that the degree of distortion should be the same for all sectors of the economy if most efficient use of resources is to be attained. Given that the grain sectors of Canada and the U.S. are both export sectors, the second-best policy would be an export subsidy.

Export subsidies, of course, can be either implicit or explicit. One way to have an implicit export subsidy would be to use a deficiency payment scheme and set the target above market-clearing levels. This is what the U.S. has done in the case of wheat for some years. Another way to subsidize exports implicitly would be to use a multiple exchange rate scheme, with preferential rates for exports. An example would be the use of a green currency for agricultural exports, as Burton Joseph has suggested.

An advantage of the deficiency payment scheme is that in principle it permits market prices to decline to less than what would otherwise be market-clearing levels, and thus keeps the price of food low as a wage good without sacrificing either the income of farmers or the efficiency criteria. A multiple exchange rate scheme, on the other hand, would not have that advantage. And loan rates set at too high a level also sacrifice potential consumer benefits, while at the same time creating a need for costly storage programs and such things as the PIK program.

Whether it would be in the national interest to let the market price decline to whatever level it reaches or to sustain it by price support programs depends ultimately on the price elasticity of foreign import demand. If that price elasticity is greater than one, and we believe it tends to be, then foreign exchange earnings and income for the export sector will be maximized by letting prices decline. If the import demand elasticity is less than one, then production controls would be a more desirable second-best policy. As we will argue below, there are other reasons for letting market prices decline.

We want to close this section by emphasizing that the use of an export subsidy in the present context is not to work a special favor for agriculture. It is instead the key to making more efficient use of the nation's resources.

2. Making more efficient use of the world's resources

Making more efficient use of the world's resources should be high on the policy agenda of most national governments. In working towards this goal, agriculture plays a key role since it is a sector with a great deal of government intervention. Professor D. Gale Johnson referred to this a few years ago by titling his book on world agriculture World Agriculture in Disarray.[2] Professors Hayami and Ruttan, in their impressive book on agricultural development, refer to the "massive disequilibrium" in world agriculture.[3]

There are a number of important dimensions to these disequilibria. In the first place, most advanced countries like the United States, Canada, the EC, and Japan set the prices of their agricultural products above market-clearing levels, while the less-developed countries tend to discriminate against their agricultural sectors. Second, there are particular sectors of the international agricultural economy that have a great deal of

---

[2]Johnson, D. Gale, World Agriculture in Disarray, Trade Policy Research Centre, London, 1973.

[3]Hayami, Yujiro, and Vernon W. Ruttan, Agricultural Development: An International Perspective, Baltimore, Johns Hopkins Press, 1971.

distortion and segmentation of markets. Sugar is perhaps the most outstanding example of such regementation, but rice and wheat follow not too far behind.

It is probably fair to say that at the present time the greatest distortions in resource use are in the less-developed countries, since until recently most of them seriously discriminated against their agricultural sectors while providing very high levels of protection to their industrial sector. The grains supplied by the North American Granary can be an important vehicle for negotiating a more efficient use of the world's resources. As exporters, both Canada and the United States have an interest in a freer, more open trading situation. But trade is a two-way street. Trade liberalization in agricultural products will be obtained only as the trade in other goods and services are liberalized. That means in particular that both countries may in the future be forced to take more labor-intensive manufactured goods in exchange for greater access to foreign markets for agricultural commodities.

An important and politically powerful dimension of the whole issue of making more efficient use of the world's resources is the issue of how we deal with the international migration issue. Countries can "trade" either by exchanging goods and services or by exchanging the inputs and resources used to produce those goods and services. For example, we can either let Mexican labor enter the U.S. and produce fresh fruits and vegetables here, or we can keep out the labor but import the final products. Both kinds of exchanges will ultimately be market equilibrating. But to shut off both, as

Canada and the United States are prone to do, is to have the worst of all possible situations in terms of aggregate resource efficiency.

3. The Hunger Issue

Both the United States and Canada have long been sensitive to the hunger and famine issue in other countries, especially when it comes in acute forms such as the India famines of yesteryear. The United States was probably the first to institutionalize a response to the world hunger problem with its famous PL 480 program. Although conceived originally primarily as a means of dumping our excess production abroad, this program over the years has become increasingly important as part of our foreign assistance programs, with even a special title (Title III) now devoted to using food for developmental purposes. Food aid now constitutes approximately 25 percent of our foreign economic assistance budget.

Academics tend to be critical of food aid as a form of foreign assistance, in large part because of its well-recognized disincentive effects in the recipient country. However, there are a number of points we would like to make about this issue. First, as a response to the distortion in price ratios within both the U.S. and Canadian economies, food aid as an implicit export subsidy has certain merit. In fact, it is an implicit export subsidy in the same sense that deficiency prices set above market clearing levels are.

Second, making food available so as to alleviate starvation and malnutrition is an important form of investing in human capital. This form

of capital is critical to the development of the international economy.

Third, if wisely used - so as to provide stronger incentives for the children of the poor to attend elementary and secondary schools[4] - food aid can have a double impact on the formation of human capital while at the same time having minimal disincentive effects.

Finally, the food security issue which has been so topical in the international community in recent years is in large part a trade and international monetary issue. This issue has to do with whether low income countries will be able to acquire food when they need it. Reducing the monetary disturbances in the international economy will probably do as much as anything to deal with the food security issue by creating a climate for more stable markets.

4. Promoting International Development

Producers of corn, wheat, soybeans, and other oilseed crops in the North American Granary have a very vital interest in the economic development of the world economy, especially in the development of the less-developed countries. These countries constitute the greatest potential for markets in the decade ahead.

Interestingly enough, the food and agriculture sector has a great role to play in obtaining this economic development. For example, given that the

---

[4]Schuh, G. Edward, "Food Aid and Human Capital Formation," in Food Aid and Development, ADC Monograph, New York: Agricultural Development Council, Inc., 1981.

bulk of the resources in the low-income countries are in the agricultural sector, development really needs to start there. We now know that the production and distribution of new production technology, together with investments in other forms of human capital, are the keys to obtaining that economic development.

Producers in the developed countries are often concerned about the transfer of new technology to other countries on the grounds that it may reduce their potential markets. Under a wide range of circumstances that will not be the case in the case of agricultural technology. The point is that the broadly distributed increases in per capita income among the poor which modernizing agriculture makes possible also increases the demand for agricultural output. If that demand shifts towards resource-intensive livestock products, the demand for imported feed grains can rise at the same time that domestic agricultural output is increasing.

The key to avoiding a zero-sum game, of course, is to facilitate the benefits from trade. That means that the foreign markets for U.S. and Canadian agricultural output will grow only if we are willing to take the exports of labor-intensive manufactured goods from those countries.

Being willing to trade with the less-developed countries is in our judgment an important means of facilitating their economic development. We believe, however, that there is still a case for foreign economic assistance, but that the bulk of that assistance should go towards helping to accumulate the stock of human capital these countries need: support for education, research, and the development of human capital institutions. We

believe less should go for physical capital such as roads, parts, and other infrastructure.

5. The Rules for Trade and International Institutions

Most of the rules for international trade and economic activities were established at the end of World War II. Not all of these institutions came off as originally conceived. For example, the GATT, which was created on an ad hoc basis after the U.S. Congress failed to ratify the treaty creating a proposed International Trade Organization (ITO) is a far cry from what was originally intended. Other institutions created at the end of World War II, such as the Bretton Woods Conventions regulating international monetary affairs, have largely broken down. And still others, such as the rules of GATT, have been subject to laborious negotiation over the years, yet have found themselves becoming increasingly irrelevant as trade has evolved in different directions or as new issues such as distortions have become increasingly important.

Creating, negotiating, and establishing new economic and political institutions by which the international economy can be better managed must be high on the policy agenda of our respective countries. The truth of the matter is that our economic integration has far outpaced our political integration and our ability to manage the rapidly changing international economy in an effective way. The international debt crisis is only one dimension to that problem, although as in earlier periods in our history, it may be the straw that breaks the camel's back. To give up the hard-fought

gains from international trade and specialization makes little sense in the kind of world we now live in.

Concluding Comments

The international economy of which the North American Granary is such an important part has undergone enormous change over the last 20 years. What was a collection of rather autonomous national economies tied together with a little bit of trade at the end of World War II, has now become a highly interdependent international economy. Unfortunately, the degree of political and policy integration has not kept pace with the degree of economic integration. We desperately need to address these political issues if we are to continue to benefit from the international division of labor that has evolved over the last 20 years.