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Trade and Macroeconomic  
Dimensions of Agricultural Policy

by

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TRADE AND MACROECONOMIC DIMENSIONS OF  
AGRICULTURAL POLICIES\*

G. Edward Schuh\*\*

Both the U.S. economy and the international economy of which it is a part have undergone dramatic changes these last 20 years.<sup>1</sup> In fact, this past 20 years may have witnessed the greatest change for a comparable period of any period in our modern history. We have witnessed a remarkable increase in the openness of our economy - or in our dependence on trade (whichever way you prefer to view it), with that dependence doubling during the decade of the 1970's, and tripling if one extends the period back to 1965. Today, approximately 25 percent of this nation's GNP is attributed to trade. Consequently, it no longer makes sense for us to view ourselves as Fortress America, or to ignore the constraints the international economy puts on our economy and our economic policies.

These last 20 years have also witnessed the emergence of a remarkable international capital market - one that ties the economies of the world together in ways every bit as important as does international trade. Perhaps more importantly, the international capital market provides a significant link among the economic policies of our respective countries.

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<sup>1</sup>For more detail on these changes and the implications for U.S. agriculture, see my testimony before the Joint Economic Committee: "U.S. Agriculture in Transition," Hearings on the Changing Economics of Agriculture: Review, Evolution, and Future Direction, Joint Economic Committee, U.S. Congress, Washington, D.C., April 28, 1982; and "U.S. Agricultural Policy in an Open World Economy," Hearings entitled Toward the Next Generation of Farm Policy, Joint Economic Committee, U.S. Congress, Washington, D.C., May 26, 1983.

The last 20 years also witnessed the shift from the old fixed exchange rate system to a system of flexible exchange rates - a system which might best be described today as a system of block floating. And finally, the last 20 years have witnessed a very significant increase in monetary instability - at the very time that other changes in the system made that instability be particularly important. For our purposes today it doesn't matter whether that instability is due to instability in our own monetary policy, or to autonomous shifts in capital. The important thing is the instability.

These changes in how we relate to the international economy have changed greatly the economics of agriculture. They have also changed the way we have to think about much of our national economic policy. Unfortunately, I fear we have not fully recognized how these changes have changed the economics of agriculture. Nor have we fully recognized how we need to think differently about our national economic policies. As a consequence, I'm going to spend most of my time today talking about things we tend to leave out when we think about agricultural policy. In the time allotted me I can do little more than touch on some of the important issues. But in so doing, I hope I can at least get them on our agenda.

#### A Macroeconomic Perspective on Agricultural Policy<sup>2</sup>

It should be obvious to most observers that the overwhelming share of work on agricultural policy in this country has been done from a sectoral perspective. Agricultural Policy has not come out of a planning ministry or a ministry of finance. Nor has much research on agricultural policy been

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<sup>2</sup>For a more in-depth discussion of some of these issues, see Schuh, G. Edward, "The New Macroeconomics of Agriculture," American Journal of Agricultural Economics 58(5): 802-811 (December 1976).

done by macroeconomists. Instead, the policy has for the most part come out of the Department of Agriculture and the two agricultural committees in the Congress. (It's only recently that the OMB has been putting significant constraints on the policy choices.) The policy research has been done for the most part by agricultural economists who have had very little training or interest in macroeconomic issues. There are exceptions to both of these assertions, but for the most part they are exceptions that prove the rule.

A macroeconomic perspective on agricultural policy brings out a number of important issues. I would like to review these briefly, for they are really what my paper is all about. First, in taking a macroeconomic perspective, we need to give more attention to what I call national or global resource efficiency. That means that agricultural policies have to be evaluated in terms of making more efficient use of our national resources, and that we have to view our national efficiency criteria in the context of the international economy and on international comparative advantage. This issue becomes increasingly important as our hegemony over the international economy declines.

Second, we need to understand the linkages among monetary and fiscal policy, the exchange rate, the international capital market, and international adjustment. If there is one thing whose importance we have grossly underestimated, it is the issues surrounding these macroeconomic policies.

Third, the domestic terms of trade become a critical analytical issue. It is not the parity ratio that matters - as has long been recognized by agricultural economists. It is the price of agricultural commodities relative to the price of all other goods and services that determines the rela-

tive social profitability of agriculture. That means that our real exchange rate is important. It also means that trade policy is important. And it is not just agricultural trade policy that is important. It is the relative protection among sectors that matters.

Fourth and finally, there is the issue of food as a wage good. Here we have somewhat of a paradox. We tend to generate a great deal of rhetoric about how cheap food is in this country and about how U.S. consumers spend the smallest share of their budget on food of any country in the world. But at the same time we give little attention to the significance of this as a factor affecting our overall competitive position in the international economy. In my judgment this will be an increasingly important issue in the years ahead.

With this as background I would like to turn now to a discussion of the major issues before us as we consider the trade and macroeconomic dimensions of agricultural policies.

### The Major Issues Before Us

There are some six issues I want to address:

#### 1. Macroeconomic Policy Issues

The substance of what I want to address under this rubric has to do with monetary policy, fiscal policy, and the exchange rate. The institutional changes that have brought these topics higher on our policy agenda are the emergence of a well-integrated international capital market and the shift from a system of fixed exchange rates to a system of flexible exchange rates.

I have discussed most of these issues elsewhere and don't want to dwell on them here today.<sup>3</sup> There is much less controversy today among agricultural economists over whether the value of the dollar matters to U.S. agricultural trade than there was ten years ago when I first raised the issue. But at the practical level of making agricultural policy, the issues are still not fully recognized, nor is the significance of the changes in this part of our economic world for agricultural policy.

A number of things are important here. First, what we have witnessed in the 1980's is a perfect example of a major change in one of our macroeconomic variables - the exchange rate - completely swamping a reasonably well-designed commodity policy. The rise in the value of the dollar from 1980 through 1983 was far greater than was imagined when loan rates, target prices, and release and call prices were established with the 1981 farm bill. Consequently, we ended up with the PIK program - which has proven to be a

<sup>3</sup>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, Banff, Canada, 1979.



very costly program.

Second, such a major realignment in the value of our currency brings about major international adjustments. It sends signals that say we should be transferring resources out of agriculture and other export sectors, but that resources should be transferring into these sectors in other countries. Nothing has been more frustrating than to see our general failure at the policy level to understand the nature of the adjustment problem we faced. Nothing has been more embarrassing than to see the complaints this nation has made to other countries about their failure to adjust in the same way we have tried to adjust. It has been clear that policy makers in the country simply have not understood the kind of economic world we now live in.

Then, in general, we have not fully understood the significance of the international capital market in the adjustments we have faced. It is the international capital market that is now driving things. But back of the capital market is our fiscal policy. The combination of our large budget deficits, the proper unwillingness of the Federal Reserve to monetize our Federal debt, and our own low savings rate has caused us to induce savings from abroad to finance that debt. The capital inflow is now on the order of \$60-70 billion a year. That helps make the dollar strong, and penalizes agriculture, other export sectors, and sectors that compete with imports.

In the last two years we have become sensitive to the international capital markets as a consequence of the debt crisis in countries such as Mexico, Brazil, and Argentina. But our understanding of these capital markets and their importance is still rather superficial. For example, we need to be more sensitive to the adjustments other countries are making in

response to these crises. For example, Brazil has devalued its currency ten-fold over the last two years while experiencing a quadrupling of its price level. That constitutes a major decline in the real value of the cruzeiro. If the Brazilians make that realignment stick - and there's every reason to believe they will - the Brazilians will very likely take away a major share of our soybean markets. Will we be ready for that kind of adjustment? What will be our response?

Similarly, incredible as it may seem, if present U.S. fiscal and monetary policies continue, this nation will at some time in 1985 become a net debtor country. In other words, we will become like Brazil, Mexico, and Argentina. If the policy response is proper, that will be a good thing for agriculture, for at some point it will lead to a weakening in the value of the dollar. But for the nation as a whole, it will mean a reduction in our real income as the external terms of trade shift against us. Are we prepared for that development?

Finally, we need to recognize that both the weakness of the dollar during the 1970's and the export boom it helped induce, and the great rise in the value of the dollar in the 1980's and the shock it has imposed on agriculture, have been as much a consequence of our petroleum and energy policy as it has been of our monetary and fiscal policies. To implicitly subsidize the imports of petroleum as we did during the 1970's can only be described as foolhardy. It imposed major adjustments on the rest of the economy. The deregulation of the petroleum industry by President Reagan has brought about a reversal of these adjustments. This only shows what an interdependent world we now live in, and how important these macroeconomic

variables are.

Our failure of analysis is demonstrated by the fact that discussion of the so-called energy crisis always focused on the rise in price of petroleum as a cost item in the production process. The real significance of that rise in price was its consequences for our balance of payments, the value of the dollar, and in turn the relative price of agricultural products.

## 2. Trade Policy

Our approach to trade policy in this country can in my view only be described as naive. We willingly negotiate voluntary export agreements, seemingly not recognizing that that works to the benefit of other countries.<sup>4</sup> We don't seem to recognize that in a flexible exchange rate regime the efficacy of tariffs and export subsidies are called into serious question. And we seem to act like we never heard of the theory of second best.

Let me for now put most of my emphasis on the theory of second best. Our starting point has to be that, despite our general free trade stance, we do make significant use of protective measures to protect certain sectors of our economy - both within agriculture and in the economy as a whole. We need to recognize that such protection constitutes discrimination against our export sectors such as agriculture. In fact, protection raises the prices of both importables and home goods relative to the price of exportables and is equivalent to an export tax on the export sector.

To what extent do we take account of this when we think about agri-

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<sup>4</sup>Allen, Ray, Claudia Dodge, and Andrew Schmitz, "Voluntary Export Restraints as Protection Policy," American Journal of Agricultural Economics 65(2): 291-97 (May 1983).

cultural policy? In my judgment, very little. And the issue is not to special - interest plead for agriculture. The issue is one of global efficiency. A little use of the theory of second best would tell us that once we intervene, we should have the same degree of intervention in all sectors of the economy. Yet we seldom ask that kind of question. The truth of the matter is that with present protection for the automobile sector, the steel industry and the textile industry, a strong case can be made for the use of export subsidies. Such subsidies would offset the consequences of current protection of the other sectors of the economy.

### 3. Food as a Wage Good

We have not in this country given much attention to food as a wage good, unless one wants to argue that early policy makers sensed this importance when they created the original Land Grant System. Such an argument is hard to make, however, since the intent of the system as I read our history was to do something for the farmer, not the worker or consumer.

In any case, food as a wage good was not an important issue as long as the performance of our national economy did not rise or fall on our international trade performance. Our growing dependence on trade will make this issue increasingly important in the future, however. Recent steps toward deregulation have shown the extent to which regulation of the domestic economy was protecting labor. Our need to compete internationally has brought forth the importance of our wage rates as a factor influencing our competitive ability. As we move into the years ahead, this issue will be increasingly important. Our eventual ability to compete internationally

will be determined in an important way by what we do about food as a wage good.

#### 4. Strategic Issues

Strategic issues can be defined in a number of ways. In their discussion of strategic U.S. trade policy, Grossman and Richardson<sup>5</sup> describe a strategic environment as one in which the number of economic agents making interdependent decisions is relatively small. The idea behind their perspective is that participants in the environment are large enough to be able to influence outcomes. Their contrast is with a perfectly competitive market in which individual participants are so small as not to be able to influence outcomes. The dimension I would like to add to that perspective is that we be talking about something other than the short-term, where the emphasis is on strategy rather than tactics.

We have at least three strategic issues before us when we think about agricultural trade and our position in the world in this larger context. The first is raised by our relative dominance in the trade of selected agricultural commodities per se. The issue is raised by the seminal paper of Carter and Schmitz<sup>6</sup> which argues that the major wheat importers may be using a scientific tariff. It is also raised by our West Coast colleagues in their discussion of cartels.<sup>7</sup> And beyond that there are the various issues

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<sup>5</sup>Grossman, Gene M., and J. David Richardson, Strategic U.S. Trade Policy: A Survey of Issues and Early Analysis, NBER, Research Progress Report, Cambridge, Massachusetts, 1984.

<sup>6</sup>Carter, Colin, and Andrew Schmitz, "Import Tariffs and Price Formation in the World Wheat Market," American Journal of Agricultural Economics 61: 517-522, 1979.

<sup>7</sup>Schmitz, Andrew, Alex F. McCalla, Donald O. Mitchell, and Colin A. Carter, Grain Export Cartels, Bollinger Publishing Co., Cambridge, Mass., 1981.

surrounding state trading companies, state-owned enterprises, and other forms of state activities.

I personally am not persuaded that we have much leverage in these markets, if for no other reason than that most countries are only marginal importers of the commodities we export. Our experience with the embargo on sales to the Soviet Union provided us strong evidence that we have little leverage in the international grain markets. But my skepticism aside, we do need to keep this set of issues on our agenda.

The second set of issues have to do with our R & D policy. In the past we have rarely looked at this as an international issue - or tried to channel our R & D efforts so as to assure our continued international competitiveness. We no longer have that luxury. The growing system of International Agricultural Research Centers is now starting to generate a sustained flow of new production technology for tropical agriculture. Many countries such as Brazil are making sustained commitments to their agricultural research systems. We no longer can afford the complacency about our agricultural R & D system that we have tolerated up to now.<sup>8</sup>

Third, there is the issue of immigration policy - which Congress keeps trying to do something about but which continues to stymie it. The issue is rapidly coming down to whether we import the labor and do the value added here with our other resources, or whether we import the labor intensive products. The costs to our consumers of failing to do one or the other can be quite high.

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<sup>8</sup>G. Edward Schuh, "What Agricultural Exports Mean to Agricultural Research," presented at meeting of National Industry-State Agricultural Research (NISARC), Arlington, Virginia, February 14-15, 1984.

## 5. Adjustment Policies

When agriculture was producing primarily for the domestic economy and the domestic economy was relatively stable, the major adjustment problem agriculture faced was the secular problem of adjusting labor out of the sector. That problem is largely behind us now, or at least made more tractable by the small share that agriculture makes up of the total economy. In its place is the shorter-term problem of adjusting to changes in foreign demand, induced by changes in the real exchange rate and other factors in foreign markets.

The problems agriculture now faces are an important example of such adjustment needs. U.S. agriculture experienced an export boom in the 1970's, motivated in large part by a decline in the real value of the dollar (see Figure 1). A net flow of resources was pulled into the sector for the first time in 50 years.<sup>9</sup> The dramatic rise in the value of the dollar in the early 1980's (see Figure 1) sent signals to transfer resources out of agriculture. Unfortunately, rather than facilitating that adjustment so that supply could be brought back into balance with demand, the commodity programs actually impeded the adjustment here at home, while sending even stronger signals for producers abroad to increase their output.

Under present arrangements of exchange rates that undergo such large swings this nation needs positive adjustment policies to facilitate the required adjustment, in addition to more flexibility in loan and target prices so that the needed adjustment is not so great. It is doubtful whether

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<sup>9</sup>The total stock of resources in agriculture increased approximately 8 percent in the second half of the 1970's.

voluntary set-asides will be adequate to bring about the needed adjustment. Paid diversion programs may be able to accomplish it, but will require more political and administrative agility than appears to have been present in the past. Mandatory production controls suffer from the same defects as paid diversion programs, with the added caveat that at least in the past farmers have not opted for them when given the choice.

Providing more flexibility in loan and target prices will reduce the need for adjustment policies. The remaining policies needed will have to focus on facilitating labor adjustment, and include the usual instruments of training programs, job locations, and support of relocation costs.

#### 6. Reform of our International Institutions

This topic deserves a paper in itself. We now find ourselves in a situation in which the economic integration of the international economy has far outpaced our political integration at that level. In addition, most of our international institutions were designed at the end of World War II. Some of these institutions, such as the GATT, have grown increasingly irrelevant to our international trade. Others have broken down and disappeared, such as the Bretton-Woods provisions regarding fixed exchange rates. And in some cases, such as rules for preventing distortions in exchange rates, we never did have any effective international agreement.

It is clear to this author that the problems of U.S. agriculture will not be solved by domestic policies alone. U.S. agriculture is now too much of the international economy. Shocks emanating from abroad and with present institutional arrangements can be offset or attenuated only at very large



costs. Hence, we need to be designing and help establish new international arrangements at the same time that we undertake the reform of our domestic policies.

In seeking to establish new international arrangements, two issues should have high priority. The first is the need for a more robust system to manage the international monetary system. In my judgment we are playing Russian roulette with a system that is precarious, fragile, and haphazard. Given that the world is essentially on a dollar standard, the U.S. acts essentially as central banker for the world. We reap a modest seignorage gain from providing this service. But at the same time we impose significant costs on important sectors of our economy.

I have argued elsewhere that we need to establish an International Central Bank.<sup>10</sup> This could be done in a rudimentary form by phasing out the dollar as the international reserve currency and substitute SDR's in its place. Then the International Monetary Fund should be given a mandate to keep the stock of SDR's growing at a constant rate.

The United States has opposed such a solution, largely out of a lack of confidence that any international institution can be made to work effectively. It is difficult to imagine what an alternative arrangement would be, for some means is needed to keep international monetary reserves growing to facilitate trade, and to reduce the international monetary instability that has characterized the last fifteen years. It is not clear to this observer that it is in the best interests of the U.S. or of the rest of the world for us to continue with the present system. The consequences of a collapse of

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<sup>10</sup>Schuh, G. Edward, "Towards Reform of our International Monetary and Trade Institutions," in Issues in Third World Development, edited by Kenneth C. Nobe and Rajan K. Sampath, Westview Press, Boulder, Colorado, 1983, pp. 419-434.

this system would be quite great. Similarly, the consequences of the U.S. pumping a lot of money into the system should it start to collapse would also have a high price to our economy.

The second institution needing reform is the General Agreement on Tariffs and Trade. The GATT needs to be inclusive of countries to reflect our changing patterns of trade toward the centrally-planned and less-developed countries. Agriculture needs to be a more integral part of the GATT, and the rules of trade need to be extended to cover non-tariff barriers to trade, state enterprises, distortions in exchange rates, and barriers to exports imposed by exporting countries themselves. The settlements mechanism could also stand a great deal of improvement.

#### A Concluding Comment

As World War II drew to a close and the post-World War II period emerged, the international economy could best be described as a collection of national economies tied together with a little bit of trade. Today, this nation is an integral part of a highly interdependent international economy in which the international capital market is as important as a link tying national economies together as is trade.

Commodity policies designed for that earlier era no longer serve us well. The costs of the PIK program should have effectively made that point.

Unfortunately, a fundamental difficulty this nation now faces is that in the Congress, agricultural policy is still made by the agricultural committees. The issues of trade, monetary, and fiscal policies are largely beyond the responsibility of those committees. Consequently, we can expect

them to do little more than tinker with the commodity programs. Surely we don't expect the members of these committees to vote themselves out of business. Until they do, however, we can expect to see little more than fine-tuning of our commodity programs. The issues that really matter to agriculture will largely go by default to others. And the costs of our commodity programs will continue to be high.