MANAGING DEMAND TO MINIMIZE INSTABILITY IN THE 1980s: THE TRADE DILEMMA

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Managing agricultural demand for U.S. agricultural products in the 1980s involves at least two issues: the likely magnitude of interannual fluctuations in agricultural production and consumption and the need for demand management, and the issue of demand management options.

The consensus seems to be emerging on the first issue that, given the global supply and demand prospects likely over the decade ahead, farm sector management problems in the United States could well increase significantly and depend to a far greater extent than in the last several decades on demand as well as supply adjustments.

The second issue of U.S. demand management options has received considerably less attention. I plan to focus my comments on a single, but perhaps the most important, component of U.S. demand management — managing foreign demand for our agricultural products. I've used an elementary notion of U.S. and foreign agricultural supply and demand elasticities to put the unique U.S. problem of trade demand management into perspective. In doing so, I've emphasized the implications of these changing elasticities for the distribution across countries of the burden of adjusting to shocks to the world agricultural system.

Introduction

Over the last decade, the world agricultural economy has undergone a subtle but critical shift in its handling of the shocks endemic to a system dependent on factors as unpredictable as weather, the state of more than two dozen key macroeconomies around the world, and a myriad of conflicting agricultural and trade policies.

Traditionally, the world agricultural economy adjusted to shocks — be they production windfalls or shortfalls or unforeseen increases or decreases in consumption — largely through adjustments in supply. Disruptions as critical and as very different in cause and effect as the 1966 Indian drought and the 1970-71 corn blight in the United

States were compensated for through relatively small changes in world prices and, in turn, through changes in stocks and production. Moreover, these supply-side adjustments were short lived; they generally were immediate and their impact seldom extended beyond 6-8 months until the next season's crop was in prospect.

Conversely, the demand adjustments sparked by these shocks and a host of other unexpected interannual fluctuations in supply and demand around the world were relatively weak, often non-existent — particularly if the trade-isolationist Soviet Union is excluded from consideration. Supply adjustments tended to be three or four times the magnitude of demand adjustments.

World agricultural supply — defined to include both production and stocks — during the 1950s, the 1960s, and the early 1970s was generally far more responsive to price changes than was the world demand for agricultural products. This is, in retrospect, a logical state of affairs given the considerable surplus productive capacity available over most of the period and the nature of agricultural products. This is, in retrospect, a logical state of affairs given the considerable surplus productive capacity available over most of the period and the nature of agricultural — particularly food — demand.

More recently in the middle and late 1970s, however, shocks in the world agricultural economy have tended to spark adjustments spread more evenly across both supply and demand. Most notable among the developments generating this change in the adjustment process were what appear to be structural shifts in supply. As more of the world's resources were used more intensively on a regular basis and as stock holding behavior changed in response to macro-economic factors, supply's responsiveness to changes in world market prices weakened considerably. Demand also seems to have undergone its own transformation related to changing usage patterns, exchange rates, and a number of other macro-economic factors.

At first glance, these developments should have signaled the transition toward a smoother functioning world market and, given our trade linkages, a smoother functioning U.S. market. But a closer look suggests that the world market is functioning less smoothly, less efficiently from a U.S. point of view. The most pronounced changes in elasticities have been in the United States. Tightening resource constraints are making U.S. supply increasingly less responsive to changes in world market prices. But what is critical, however, is that the United States remains by far the most price elastic supplier in relative terms and as a result will continue to be called on to do the bulk of the world's supply adjusting.

Similarly, data for the mid and late 1970s also suggest demand for agricultural products in the United States has become more price responsive while foreign demand has not changed significantly. As

a result, demand in the United States has become even more price responsive relative to demand elsewhere in the world than in the 1950s and 1960s. Perhaps these changes in supply and demand behavior are due not so much to underlying changes in structure as to changes in market circumstances that have moved us into different areas of the same supply and demand curves. The implications for increases in the already disproportionately large share of world adjustments absorbed by the United States, however, are the same in either case.

This changing balance between U.S. and foreign supply and demand price responses can also be seen from a policy perspective. Over the last several decades, more and more countries have isolated themselves from the world market and its equilibrating adjustments in their agricultural supply and demand. Their willingness, however, to dip into the world market to insure stable food supplies at home or to dispose of occasional production windfalls, has allowed them to import stability and export instability. Their isolation has left the burden of balancing world agricultural supply and demand to a few countries tied directly to the market. Adjustment in these countries has traditionally been supply-based, but during the 1970s adjustments have impacted significantly on their domestic demand as well.

This changing elasticity balance and policy setting, combined with the general outlook for the 1980s discussed earlier at these meetings, suggests that the United States faces the possibility of bearing an even larger share of more frequent and severe shocks to the world agricultural economy.

Trade Policy Linkages

This changing balance in the magnitude of adjustment problems and the sources of adjustment arose not so much by chance but as a result of the agricultural and trade policies in effect in the United States and the evolving U.S. agricultural relations with the rest of the world. I will now concentrate on identifying how our current trade policies evolved, the role they have played in shaping the world adjustment process, and what options they provide for minimizing world instability and the U.S. adjustment burden in the 1980s.

A Historical Perspective on U.S. Trade Policy

The rationale underlying our agricultural trade policies over the last 30 years evolved immediately prior to and during the decade following World War II. As a result, they reflected an overriding depression-era concern with excess production capacity and wartime demand for all available output as a means of easing this disequilibrium. By the start of World War II, the American agricultural sector had undergone several decades of technological change affecting virtually every facet of the farm sector and the structure of farm-

ing. The highly competitive nature of farming forced operators to adopt this newly emerging technology quickly or be placed at a serious disadvantage to those who did.

The result was disequilibrium — too many resources, particularly land and labor, devoted to agricultural production. The disequilibrium problem was further aggravated by the limited alternative uses available for excess agricultural resources and the slow rate at which excess labor flowed out of agriculture. Our war-time experience with exports as an outlet for otherwise surplus production temporarily eased this disequilibrium problem.

Given the magnitude of the disequilibrium problem that re-emerged in the late 1940s, post-war policy makers concluded that exports had to be a central component of their policy package. Policy analysts were quick to note that producing for a large and growing export market allowed farmers to use 75 to 80 percent of their capacity while producing for the domestic market alone would limit them to 55 to 60 percent of capacity. Cost curves, the argument ran with considerable empirical support, were such that unit costs were actually lower at the higher capacity utilization level. Given the higher program costs that would have been associated with tightening constraints on production in the 1950s and 1960s, unit costs in the broadest sense quite likely were lower with the sector committed to producing for export. As a result, exports — even concessional exports — were seen to have a low, possibly negative opportunity cost and sizeable benefits in terms of payments, farm income, and federal budget.

This sense of the beneficial impact of agricultural exports was behind our post-war stance in favor of expanding world agricultural trade through liberalization, particularly in grains and other products in abundant supply in the United States. It also underlay the international agricultural trade programs developed over the first 20 years of the post-war period including the export promotion and export subsidy programs aimed at fostering long term growth in commercial trade and, by the mid 1950s, concessional trade programs as well. This same notion of the positive impact of exports also underlay our willingness to tie our domestic market directly to the world market and to absorb more of the world's interannual fluctuations in supply and demand.

These programs aimed at expanding exports were quite successful; over the 1950 to 1970 period, U.S. exports expanded an average of 5 to 6 percent per year while gains in productive capacity averaged 2 percent and gains in domestic usage averaged 1.5-1.7 percent. Foreign dependence on the United States as a source of supply grew from 2 percent in the 1950s to 7-9 percent in the early 1970s despite a strong move toward food self-sufficiency in the European Community, the world's largest market for agricultural products.

Impact on the Structure of Agricultural Supply and Demand Abroad

U.S. agricultural and trade policies in the post-war period pivoted on the government's willingness to accumulate surpluses as stocks during one period and to draw down these surpluses later, with little if any compensation for storage cost, to meet supply or demand fluctuations virtually anywhere in the world.

As a result, foreign countries were able to minimize the stocks they held. As stocks became increasingly concentrated in the United States, many foreign countries' capacity to adjust supply to compensate for shocks either at home or abroad dwindled. Our excess productive capacity, and our policy commitment to use it to compensate for virtually any shock to the world system, also encouraged many countries — particularly developing countries — to forego the investments in agriculture necessary to keep their sectors responsive.

In short, much of the rest of the world was quick to recognize the United States as a reliable — possibly even a captive — residual supplier in a buyer's rather than a seller's market. U.S. policies also had a less direct impact on the structure of foreign agricultural demand. Our trade programs — export promotion, commercial credit, donation, and concessional sale programs — and possibly even our trade liberalization stance tended to enhance demand abroad.

By removing or minimizing much of the rest of the world's need to adjust their agricultural supply or demand to compensate for foreign and in some cases even indigenous shocks, we allowed them to forego developing the admittedly costly capacity to adjust. The increasingly protectionist trade policies put into effect over the 1950s and 1960s in a number of countries further weakened their demand and supply response capacity by institutionalizing stability, often via complex systems of trade restrictions and variable levies. This drift toward protectionism was facilitated by our commitment to export as much as possible whenever possible.

Trade Policies to Ease the U.S.'s Adjustment Burden in the 1980s

By whatever combination of circumstances, the United States as the start of the 1980s is faced with bearing a disproportionately large share of the world market's adjustment burden. Moreover, if the supply-demand balance for the 1980s oscillates widely, the world adjustment burden will increase significantly. Equally important, the return on producing for export is changing dramatically with the disappearance of our excess capacity. Growth in foreign demand for our products in the 1970s pushed capacity utilization up from 80-85 percent to 90-95 percent — on occasion to 100 percent. Exports in the volume likely in the 1980s will tend to raise the opportunity costs of producing for export significantly, both in

the limited sense of the producer expenses and in the broader sense of food price inflation, resource use, and environmental stress.

Much as our trade policies helped work the United States into this position, a realignment of our trade policies should be able to ease the U.S.'s adjustment burden by increasing the price elasticity of agricultural supply and demand abroad — or at least by increasing the return on our trade with the world market. Three policy areas appear likely to be critical — our policy on trade liberalization as it affects the functioning of the world market, our policy on reserves as it affects other countries' capacity to bear more of their own adjustment burdens indigenously, and our position on aid. I'll deal with each of these in turn in greater detail.

Liberalizing World Agricultural Trade

The changing setting of the 1980s will put a premium on the effective U.S. use of trade policy to liberalize world agricultural trade. Agricultural trade liberalization has been a longstanding U.S. goal but the underlying rationale for this stance and the benefits it can hope to realize from liberalization have changed dramatically. Past liberalization effects reflected, in large part, a concern with expanding trade by easing the foreign tariff and non-tariff barriers affecting U.S. agricultural exports.

Liberalization in the 1980s has become first and foremost a means of stabilizing the world market, of strengthening the linkages between national markets and the world market — in turn allowing the world market to adjust more effectively. From a U.S. prospective, liberalizing trade will increase the number of adjusters in the world market, increase their sensitivity and responsiveness to the need for adjustment, and decrease our adjustment burden. While the rest of the world's sensitivity to shocks and capacity to adjust — i.e., their supply and demand responsiveness — ultimately depends on a range of institutional and resource endorsement factors, closer linkage to the world market is a critical first step.

International Reserves

Much of the U.S. ability and willingness to absorb shocks in the 1950s and 1960s was due to our position in world stock holding and management. Greater foreign responsiveness to shocks to the system in the 1980s will depend not only on liberalizing trade to insure that world market price signals are transmitted to indigenous producers and consumers but also on insuring that more countries have the stocks with which to make short term adjustments.

The results of the studies done over the last three years to support the reserve discussions at the International Wheat Council demonstrate that the potential exists for balancing expanded and better managed stocks off against much of the increased market variability

expected in the 1980s. Moreover, developments in the international grain market over the last several years suggest that we are shifting from a buyer's to a seller's market and that larger stocks will be necessary if the world market is to function smoothly even in the absence of increased variability.

What is needed in any case, however, to maximize the adjustment value of stocks in a world where the potential for production adjustments is decreasing is better managed as well as bigger stocks. In short, our vested interest in an international system of reserves is stronger now than ever before and should not be dictated by short-sighted concern with the timing of stock buildups. Even if an international effort to establish an expanded, better-managed international reserve should fail, an expanded, better-managed national U.S. reserve will be in our vested interest to aid in meeting our commercial and concessional trade commitments and in minimizing the impact of imported instability on our domestic market.

Expanding Food Aid Responsibility

Also of concern if the United States is to avoid assuming an even larger adjustment burden in the 1980s is a more equitable division of responsibilities for meeting the aid needs of the low income countries. Common to these trade liberalization, international reserve, and food aid concerns is the United States' interest in — and our increasingly strong position to insist on — a more equitable sharing of the costs and benefits of world trade.

Alternatives

If these initiatives fail, a frank U.S. reappraisal of what can be done to minimize the costs and maximize the benefits associated with our linkages to the world market is in order.

On the cost minimization side, exploration of the marketing alternatives used by other exporters and most importers to weaken the price linkage between their domestic market and the world market — and in turn their adjustment burden — is a place to start. Included among these marketing alternatives is the creation of export marketing boards or an expanded system of long term trade agreements linked to tighten export volume controls.

At issue here is the prioritization of demand for our products here and abroad. Heretofore, temporary shifts in import demand overseas due to weather or policy factors or fluctuations in production in the United States forced U.S. policymakers to prioritize what proved to be temporarily conflicting trade policy and domestic agricultural policy goals. This prioritization involved short term trade-offs between foreign and domestic consumers but no change in our basic longer term commitment to maximize export volume.

The new resource equilibrium emerging in U.S. agriculture in the 1980s will force us to take a fundamental look at what level of exports is good for the economy as a whole in the short-term and what rate of growth in exports is advisable over the longer run.

On the benefit maximization side, U.S. policy initiatives will need to concentrate on increasing the return on our participation in a volatile world market. The marketing boards used by many countries to minimize disruptions and to target export volume levels can also be used to insure that the return on export sales covers the full cost of producing and marketing agricultural products. While export promotion programs may appear initially to be superfluous in the 1980s, they could well play a critical role in focusing export growth on the products that tax our resource base and worsen our food price inflation problems least. They can also be used to target exports to the more stable rather than the most volatile markets.

Conclusions

In summary, a number of factors as different as resource constraints, exchange rate fluctuations, and trade policy decisions combined over the 1970s to change the way the world market adjusts to system disruptions. Traditionally, adjustments have been largely supply-based and have had little, if any, demand impact. Given the supply and demand developments likely over the decade ahead, adjustments are apt to be larger and to be spread more widely across both demand and supply. Moreover, given changing supply and demand elasticies in the United States and the rest of the world, the United States will quite likely continue to be the world's major adjustor.

Without concentrated policy action in the United States, much of this adjustment burden will spill over into demand disruption — disruption of domestic demand rather than foreign demand for our products. Much as the trade policy decisions of the last decade got the United States into this state of affairs, trade policies can help generate a more equitable sharing across countries of the significantly heavier adjustment burdens ahead.

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