Chapter 2

Policy Linkages Through Trade

1 INTRODUCTION

The previous chapter has presented a brief picture of world agriculture from an international perspective. Decisions on policy are taken generally at a national level, but nations are connected internationally by trade. This both constrains and enlarges the scope for national action. In this chapter we begin to develop an analytical framework for looking at intercountry interdependence. The focus is on trade relations where world prices are the links between nations. Thus, an analysis of price transmission between international and national markets is of crucial importance. We begin looking at international markets by constructing a simple model using excess supply and demand functions for a single-commodity, two-country world. The model is static and assumes initially no government intervention. The next step is to introduce policy intervention at the national level, looking at some examples of single-commodity policy intervention, and to illustrate the impact on world markets. We then introduce storage policies as a further element in policy interaction through world markets. The question of cross-commodity linkages is deferred to Chapter 3.
II SINGLE-COMMODITY LINKAGES

A Graphical Analysis of Trade Linkage

The analysis of international markets can conveniently begin with the standard concepts of national supply and demand functions for two countries for a particular commodity. These are shown in Figure 2-1. Assume that Country A is a low-price producer, perhaps because of favorable resource endowments leading to low costs or because domestic demand relative to supply potential is small. In the absence of trade, domestic price would be \( P_A \). For prices above \( P_A \), producers in Country A would produce more than domestic consumers would buy. Thus, we can trace an *excess supply function* (\( E_s \)) for Country A, the supply function of exports onto the world market. It should be noted that at prices below \( P_A \), Country A would be an importer; if we confine ourselves to prices above that level, we can ignore this part of the function.

Suppose that Country B has higher costs or large domestic demand relative to production potential. This country is also represented in Figure 2-1 where \( S_B \) and \( D_B \) are Country B's domestic supply and demand functions for the commodity. In the absence of trade, price would be \( P_B \), which by construction and assumption is above \( P_A \) in Country A. For prices below \( P_B \), consumers in Country B would demand more than producers would produce. As price fell, this difference would grow, thus tracing out an *excess demand function* (\( E_d \)). This is the demand function for imports from the world market. Again, for completeness, it should be noted that for prices above \( P_B \) Country B would be an exporter. Now let there be trade between Countries A and B, for simplicity assuming zero transportation costs. Equi-

![Figure 2-1 Two-country, one-commodity model of international trade.](image-url)
librium in the international market occurs where $E_s = E_d$, yielding a world price of $P_w$. Country A exports $(Q_2 - Q_1)$ which is equal to $Q_3$, the volume traded in world markets, and is equal to $(Q_5 - Q_4)$, Country B's volume of imports.

With this basic model, it is straightforward to explore the most basic form of international interdependence. Suppose Country B (an importer) had bad weather in a given year, thus shifting $S_B$ to $S'_B$ in Figure 2-2. This shifts the world demand ($E_d$) to the right, resulting in an increase in world price to $P'_w$ and an increase in the volume of trade to $Q_8$. Prices rise in Country A, reducing domestic consumption, increasing production, and therefore, expanding exports to $(Q_7 - Q_6)$. Thus, an internal event in one country is transmitted to another country through changes in prices in the international market.

It should be clear that the slopes of the excess supply and demand functions depend on the slopes of the domestic supply and demand functions. The slope of the excess functions are equal to the sum of the (absolute values of the) slopes of the domestic supply and demand functions. Therefore, at any given price, the elasticities of the excess functions are a weighted sum of the elasticities of the parent functions. If domestic supply in the exporting country is perfectly inelastic, the slope of the excess supply function is equal to the absolute value of the slope of the domestic demand function. Similarly, if domestic demand in the importing country is perfectly inelastic, then the slope of the new excess demand function is equal to the negative of the slope of domestic supply function. Conversely, the greater the slopes of the domestic supply and demand functions, the greater the slope of the excess functions.

As the world is not made up of a single exporter and a single importer, it is necessary in most situations to use a model of multilateral trading. This can be accomplished by simply adding the excess demand and supply sched-
ules of additional exporters and importers. The addition of more countries increases the slope of the world export supply and import demand functions relative to the slope of individual country functions. Thus, it is likely that even if there exist highly price-unresponsive functions in individual countries, the responsiveness of the aggregate excess functions will be quite high in a market with many trading countries.

B. Trade Elasticities

It will be useful later on to have at hand the equations that lie behind these graphs. To develop these, we can, as in most economic models, start with an identity, add some behavioral equations, establish an equilibrium position where ex ante behavior is consistent with the ex post identity, and then express the set of equations in the form of relationships among variables. First, we need the identities. In the absence of any carry-over between years, we know that

\[ S_w = D_w \]  

(2-1)

where \( S_w \) is total world supply and \( D_w \) is total world demand. For any one country, in an open system, supply and demand can differ by the amount traded:

\[ S_A + M_A = D_A + X_A. \]  

(2-2)

where \( M_A \) is imports into Country A and \( X_A \) is exports from that country. The left-hand side of the identity is total availability and the right-hand side is total disappearance of the commodity. These identities will always hold ex post (subject to measurement errors): The same relationships can be thought of as ex ante equilibrium or market clearing conditions. For the countries trading with each other:

\[ S_A - D_A = X_A - M_A = M_B - X_B = D_B - S_B \]  

(2-3)

Let Country A be a net exporter and Country B a net importer. Then for convenience we can define \( X_A \) and \( M_B \) as net exports and imports, respectively, and simplify the identities to

\[ S_A - D_A = X_A = M_B = D_B - S_B \]  

(2-4)

Again, this represents the ex ante market clearing equilibrium.

We can add the behavioral functions by assuming that (as in the diagrams) all prices are the same throughout the system:
\[ S_A = S_A(P, \ldots) \]  
\[ D_A = D_A(P, \ldots) \]  
\[ S_B = S_B(P, \ldots) \]  
\[ D_B = D_B(P, \ldots) \]  

where nonprice arguments are omitted for convenience. Therefore, we can write \( X_A \) and \( M_B \) as a function of price:

\[ X_A = X_A(P, \ldots) = S_A(P, \ldots) - D_A(P, \ldots) \]  
\[ M_B = M_B(P, \ldots) = D_B(P, \ldots) - S_B(P, \ldots) \]  

Since price changes are needed to restore the system to balance after any disturbance, we need to establish the sensitivity of quantities to price changed (i.e., the slopes of the lines in the diagrams).

\[ \frac{dX_A}{dP} = \frac{dS_A}{dP} - \frac{dD_A}{dP} \]  
\[ \frac{dM_B}{dP} = \frac{dD_B}{dP} - \frac{dS_B}{dP} \]  

It is common to translate these price sensitivities into elasticities, in part because this frees the expressions from dependence upon the units chosen. Thus,

\[ E_{X_A, P} = \frac{dX_A}{dP} \cdot \frac{P}{X_A} \]  
\[ E_{M_B, P} = \frac{dM_B}{dP} \cdot \frac{P}{M_B} \]  

where \( E_{X_A, P} \) is the elasticity of \( X_A \) with respect to \( P \), etc.

This can then be written in terms of the domestic elasticities of supply and demand with respect to price:

\[ E_{X_A, P} = \left( \frac{dS_A}{dP} \cdot \frac{P}{X_A} \cdot \frac{S_A}{S_A} \right) - \left( \frac{dD_A}{dP} \cdot \frac{P}{X_A} \cdot \frac{D_A}{D_A} \right) \]  
\[ = E_{S_A, P} \cdot \left( \frac{S_A}{X_A} \right) - E_{D_A, P} \cdot \left( \frac{D_A}{X_A} \right) \]  
\[ E_{M_B, P} = \left( \frac{dD_B}{dP} \cdot \frac{P}{M_B} \cdot \frac{D_B}{D_B} \right) - \left( \frac{dS_B}{dP} \cdot \frac{P}{M_B} \cdot \frac{S_B}{S_B} \right) \]  
\[ = E_{D_B, P} \cdot \left( \frac{D_B}{M_B} \right) - E_{S_B, P} \cdot \left( \frac{S_B}{M_B} \right) \]  

where the terms \( (S_A/S_A) \), etc., are introduced without changing the values of
the right-hand terms in order to arrive at the weighted elasticity. The terms 
\( (S_A/X_A) \), etc., are the weights that must be applied to the domestic supply 
and demand elasticities to get to the elasticity of trade with respect to price.

III IMPACTS OF DOMESTIC POLICY ON INTERNATIONAL MARKETS

The analysis to date has assumed no government intervention in the domestic food and agricultural sector. Governments intervene in the food and agricultural sector for a variety of reasons including price and income enhancement for producers, subsidization of consumer prices, implicit and explicit taxation of the sector, transfers of income and many others. These interventions, whether by exporters or importers, by definition alter that country's interface with world markets and therefore alter conditions in world markets as seen by other countries. Two impacts can be distinguished: the effect on the world price level and the consequence for world price stability. The impact on price levels depends upon their relationship between domestic and international prices. The implication for stability arises from the extent to which the domestic price is fixed by policy or is allowed to react to the changes in the world price level. In this section we add the instruments of intervention to our simple model of commodity and country linkages.

A Per-Unit Subsidies and Taxes

First consider the imposition by the importing countries of a per-unit tariff on imports. As shown in Figure 2-3, the imposition by Country B of a tariff equal to \( t \) essentially shifts their excess demand downward by the amount of

![Figure 2-3](image_url)  
**Figure 2-3** Impact of tariff on domestic and world market prices.
the tariff to \( E'_d \). World price, and hence, the price in the exporting country falls to \( P'_A \); price in the importing country rises to \( P'_B \) (they differ by \( t \)) and the volume of trade falls to \( Q' \) from \( Q \). The result would be the same in terms of domestic prices and quantities (but not of government revenues) if Country A applied an export tax equal to \( t \) (analytically one would shift the excess supply function upwards by \( t \)). The world price, however, would rise in this case, to the level in the importing country. Intervention reduces trade, with a tariff decreasing world prices and an export tax increasing them. The tariff raises prices in the importing country by making imported products more expensive: It represents a combined producer subsidy and consumer tax. The export tax represents a producer tax combined with a consumer subsidy in the exporting country.

Import subsidies and export subsidies have just the opposite effects to trade taxes. In the diagram (Figure 2-3) these policies would shift the import demand curve upward or the export supply curve downward, leading to an increase in total trade. An import subsidy raises the world price, benefiting the exporter, and an export subsidy would lower the world prices to the advantage of the importer. The same analysis can be applied to domestic taxes and subsidies applied on the internal market, rather than at the border. The horizontal shift in the trade curves in Figure 2-3 will, under these conditions, merely be the quantity effect of the domestic tax/subsidy measure. All other results follow by analogy.

Policies of this nature, which shift the trade curves by a fixed amount per unit, do not alter the stability of market prices (in terms of absolute price variations). The slope of the excess demand and supply curves is preserved. Consequently, any exogenous shift in supply (for instance) in the market will have the same price change effect as with free trade. Per-unit protection shifts world price but does not alter its variance.

### B Fixed Domestic Prices

Per-unit taxes and subsidies do not cover all the types of policies used in agricultural markets; governments are much more inventive in their kinds of intervention. One other type of intervention is particularly important. Countries often take direct, rather than indirect, action to regulate internal prices. Governments can fix producer or consumer prices directly, or they achieve similar ends by controlling trade prices at the border. These fixed prices could have a **producer bias**, i.e., producer prices above world prices, a **consumer bias**, i.e., consumer prices below world prices, or both. A brief taxonomy is presented in Table 2-1 which shows for importers and exporters what these various options might be. The examples of policies given in the bottom line are only illustrations. There are other instruments which could lead to the same results. The following sections attempt to shed light on the impacts of such fixed-price policies on world commodity markets.
<table>
<thead>
<tr>
<th>Level of domestic price</th>
<th>Importers</th>
<th>Exporters</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (above $W_p$)</td>
<td>$P_p$, $P_c$, $P_p$</td>
<td>$P_p$, $P_c$, $P_p$</td>
</tr>
<tr>
<td>World price</td>
<td>$P_c$, $P_p$, $P_c$, $P_c$, $P_c$</td>
<td>$P_p$, $P_c$, $P_p$, $P_c$, $P_c$</td>
</tr>
<tr>
<td>Low (below $W_p$)</td>
<td>$P_c$, $P_c$, $P_c$, $P_c$, $P_c$</td>
<td>$P_p$, $P_c$, $P_p$, $P_c$, $P_c$</td>
</tr>
</tbody>
</table>

Examples of policies:
- Variable import levies
- Variable deficiency payments
- Variable state marketing
- Variable consumer subsidies
- Variable import subsidies
- Variable free trade
- Variable export subsidy
- Variable deficiency payment
- Variable state marketing
- Variable consumer subsidies
- Variable export taxes

$P_p = $ producer price-variable; $P_c = $ producer price-fixed or minimum
$P_c = $ consumer price-variable; $P_c = $ consumer price-fixed or maximum
The main difference between a tariff on the one hand and fixed domestic or trade prices on the other is that the latter have the effect of changing the slope of the excess supply function with respect to world market prices (Johnson, 1975; Jones and Thompson, 1978; Josling, 1981). This is shown in Figure 2-4. If the country fixed the price to producers at $\bar{P}_p$ (and allows consumers to buy at world prices), the domestic supply function $S_A'$ becomes vertical relative to world prices. Thus, the excess supply function rotates to $E_s'$. In other words, intervention has decreased the slope of the excess supply function (i.e., made it more inelastic). If, instead, the exporting country guaranteed $\bar{P}_p$ as a minimum producer price, the domestic supply function would follow $S_A'$ below that price and $S_A$ above it; the excess supply function would also be kinked at the intervention price. If the government also made consumers pay the fixed price $\bar{P}_p$ then domestic demand relative to world prices would be $D_A'$. The combination of fixed producer and consumer price would yield a perfectly inelastic excess supply function $E_s''$. This result follows directly from the fact that the domestic price intervention isolates domestic prices from world prices: Available export supply is strictly a function of domestic price and not at all of world prices. There are many other possible combinations of fixed and guaranteed producer and consumer prices that an exporter could use but these should be sufficient to illustrate the point.

Consider now an importer which fixes producer prices at $\bar{P}_p$, as shown in Figure 2-5. Domestic supply relative to world prices is perfectly inelastic and is shown as $S_A'$. This rotates the importer's import demand function to $E_s'$, assuming that consumers can continue to buy at world prices. With a minimum guaranteed producer price, the domestic supply curve and the import demand curve would be kinked at that minimum price, following the

![Figure 2-4 Impact on excess supply of exporter fixed-price policies.](image-url)
normal curves above that minimum price. If, in addition, the importing country made consumers pay the fixed price $\bar{P}_p$, the domestic demand would rotate to $D_B'$ and excess demand would be $E_d''$ which is perfectly inelastic with respect to world price.

Figure 2-6 illustrates the range of possibilities, with producer and consumer prices being either variable (i.e., market determined), or fixed (by policy) for both exporters and importers. In each case, domestic price intervention alters the shape of excess supply and demand functions. In all cases, it makes some part of the function steeper and in the extreme cases of fixed producer and consumer prices, makes the functions perfectly inelastic. Intervention creates the possibility of complex trade responses to world market price changes because of the “kinks” introduced into the functions.

Using these results we can see the impacts of such policy intervention on world markets. Suppose there is one exporter and one importer of wheat and that each pursues a policy of guaranteeing producers a fixed price of $\bar{P}_p$ above the free-trade price $P^*_w$. In the case of both the exporter and the importer, it is assumed that consumers buy at the world price. This case is shown in Figure 2-7. The result of intervention is to rotate and make the excess supply and demand functions more inelastic. The world price is lowered, as with the per-unit tariff policies discussed above, but now an additional impact of the policy is apparent. The steeper trade curves will add to market instability. Any shock to this market will result in larger absolute price changes. Unlike the fixed tariffs, taxes, and subsidies, fixed domestic price policies increase the variance of world market prices as well as altering
Consumer Prices:

![Diagram showing impacts of consumer and producer price policies on excess supply and excess demand.](image)

Note: All vertical axes are world prices and all horizontal axes are traded quantities.

**Figure 2-6** Impacts of consumer and producer price policies on excess supply and excess demand.
the mean. Traded quantity can either increase or decrease, depending upon the relative slopes of the trade functions.

If countries were to fix the price to consumers as well as to producers, net excess supply and demand functions would become perfectly inelastic with respect to world price. In the two-country case, this would result in market failure with either no equilibrium or an infinity of solutions if, by chance, the trade functions coincided (Jośling, 1977). This extreme pathological case of market failure would be improbable with more than two countries participating in the market, as it is unlikely that all countries would fix both producer and consumer prices.

The transmission of supply shocks (and also demand shocks) throughout the trading system depends upon the slopes of the import demand and export supply curves: They in effect summarize the domestic adjustments to the supply shock. The central problem created by the tendency of countries to fix domestic prices, for producers, consumers or both, lies in the fact that such policies (by intention) lessen domestic quantity adjustments. Thus, a greater price change on world markets is necessary to clear the market following any given supply (or demand) shock. This extra price instability represents an externality relative to the national decision to stabilize price: The instability falls on other parts of the market outside the immediate concern of the policy maker.

C Importing and Exporting Instability

One can usefully distinguish two different situations with respect to the externality involved in domestic price stabilization. One would be where the supply shock (or demand shock) is within the “stabilized” country, and the other where such a shock is in other parts of the world system. If the shock is internal, one can talk of exporting or transmitting instability to the rest of the world if the world market is made more unstable as a result of that
country's policy (active destabilization). If the shock is external, then the stabilized country could be said to be avoiding the import of instability by means of its domestic policy (passive destabilization). Analytically, the two cases are similar; politically they may carry very different connotations.

It may be worthwhile to formalize these concepts with the aid of the diagrams already used in this chapter. Figure 2-8 reproduces Figure 2-2 which illustrated the transmission of a supply shortfall in the importing country, and adds a similar situation where the supply shock is in the exporting country. The distribution of the adjustment to the supply change can be clearly seen in the world market segments of the diagrams. The supply shock in Country B shifts the import demand curve out by the full amount of the disturbance ($E_d$ to $E_d'$ in Figure 2-8a), but at that price level there is excess...
demand. The price rises (in the world market and in both countries) to dampen the demand and stimulate supply. The new equilibrium quantity traded is at C. The movement from A to C can thus be decomposed into

\[ A \rightarrow B \quad \text{Supply shock in importing country} \\
B \rightarrow C \quad \text{Reduced import demand due to price increase} \\
A \rightarrow C \quad \text{Increased export supply due to price increase} \]

Hence, we can refer to the quantity AC as being the amount of the instability "exported," whereas BC was internalized on the domestic market. This occurs not through any policy intervention, but as a reflection of the size of the country in relation to the market.

The case of a supply shock in the exporter market can be handled in the same way. The reduction in domestic supply in Country A shifts back the world export supply curve by the amount \( A \sim B \). Quantity BC is released from the exporter's domestic market (the extra exports stimulated by the price increase), and quantity \( A \rightarrow C \) is transmitted to world markets and "imported" by the importing country (as the only other actor in world markets in this example). In both importer and exporter shocks, we can define the proportion of the domestic supply shift that is passed onto world markets to be \( \frac{AC}{AB} \) while the proportion that is absorbed on the domestic market of the disturbing country is \( \frac{BC}{AB} \).

It should now be clear what the effect is of domestic price-fixing policies. Figure 2-9a shows the importer supply shock in the presence of a fixed domestic price in the exporting country. The price rise in the world market elicits no export supply response because it is not allowed to impinge upon the exporters domestic sector. Thus, none of the adjustments is transmitted from the importing country. In this example, the importer must make all the adjustments to the shortfall, choking off the higher demand by increases in price. If, however, it is the importing country that has the fixed price policy—as in the Figure 2-9b—then all of the instability is transmitted. No adjustment takes place in the importing country. The price rises in the exporting country to meet the increased level of imports.

Figure 2-9c and d illustrates the case of exporter-generated instability. In Figure 2-9c, the importer has fixed domestic prices and hence imports none of the instability emanating from the exporter. In Figure 2.9d, the exporter has the fixed-price policy and hence exports all the instability onto world markets. Fixed-price policies, by transmitting all domestic instability in production, impose all the burdens on world markets and hence on other countries. Whereas at times this effect may be beneficial to world markets, as when one country's output is negatively correlated with that of the rest of the world, for any given output disturbance the result will be to destabilize world prices.
D Price Transmission

This analysis has concentrated on quantity adjustments. It is useful sometimes to express the same relationships in terms of price adjustments. In Figure 2-8, in the absence of policy interventions, the change in price in each country corresponded to the change in the world price:

\[ \Delta P_A = \Delta P_w = \Delta P_B \]

The transmission of prices from world markets to domestic markets was unhampered. However, in Figure 2-9 this is clearly not the case. In Figure 2-9a and d the world price determines prices in the importing but not in the exporting country; in Figure 2-9b and c it is the exporting country which adjusts to world price changes while the importer isolates domestic producers.
and consumers from that impact. A “pure” fixed-price policy in a country leads to a zero price-transmission elasticity (Bredahl, Meyers, and Collins, 1979) of domestic price with respect to world price, which can be written as:

\[ E_{P_d, P_w} = 0 \]

whereas a free market policy (or an *ad valorem* tariff) leads to an elasticity of unity:

\[ E_{P_d, P_w} = 1 \]

These price-transmission elasticities are now widely used in empirical models of trade to link domestic prices with those on world markets.

**E Stocks and Stability**

So far, our analysis has assumed that markets clear in one time period without any storage from one period to another. Stocks play an important part in the process of distributing instability and reducing the impact of supply (and demand) shocks in an open system. To incorporate stocks we need only to modify the identities used above for examining the trade equilibrium. Instead of Equations (2-1) and (2-4)

\[ S_w = D_w \]

for the world, and

\[ S_A - D_A = X_A = M_B = D_B - S_B \]

for countries A and B, we now need to add two more variables:

**CI** For stocks “carried-in” from previous periods

**CO** For stocks “carried-out” to the next period

Thus, the identities become

\[ S_w + CI_w = D_w + CO_w \]  
\[ S_A + CI_A - D_A - CO_A = X_A = M_B = D_B + CO_B - S_B - CI_B \]  

Collecting the terms CI and CO together by identifying \( C = CO - CI \) as the increase in stocks, we have

\[ S_w = D_w + C_w \]  
\[ S_A - D_A - C_A = X_A = M_B = D_B - S_B + C_B \]
If $C$ is positive, there will be a build-up of stocks. It will then appear as additional current demand and have the same sign as demand in the equations. Unlike $D$, $C$ can be negative although $CO$ cannot be less than zero. The carry-out function $CO$ will, in general, depend upon price. If, for convenience, we ignore other potential arguments in the function, we can write

$$CO = CO(P, \ldots)$$ \hspace{1cm} (2-21)

and hence, since $CI$ is exogenous, we have

$$C = CO(P, \ldots) - CI = C(P, \ldots)$$ \hspace{1cm} (2-22)

Carry-out will, like current demand, generally be negatively related to current price. The lower the price, the more likely one can sell later at a profit; the higher the current price the less likely it is that future prices will be high enough to give a capital gain on the stocks. Equations (2-9) and (2-10) now read

$$X_A = X_A(P, \ldots) = S_A(P, \ldots) - D_A(P, \ldots) - C_A(P, \ldots)$$ \hspace{1cm} (2-23)

$$M_B = M_B(P, \ldots) = D_B(P, \ldots) - S_B(P, \ldots) + C_B(P, \ldots)$$ \hspace{1cm} (2-24)

Corresponding changes in Equations (2-11) and (2-12) lead to the stock-inclusive definitions of the trade elasticities:

$$E_{X_A,P} = E_{S_A,P}(S_A/X_A) - E_{D_A,P}(D_A/X_A) - E_{C_A,P}(C_A/X_A)$$ \hspace{1cm} (2-25)

$$E_{M_B,P} = E_{D_B,P}(D_B/M_B) - E_{S_B,P}(S_B/M_B) + D_{C_B,P}(C_B/M_B)$$ \hspace{1cm} (2-26)

Reverting to the diagrammatic representation of these relationships, we can conveniently add the carry-in, $CI$, to the current supply and the carry-out to current demand in the domestic diagrams and draw the excess demand and supply curves as being the difference between these stock-adjusted functions. The slope of the $CO$ function in the exporting country adds to the slope of $X_A$, and that of the $CO$ function in the importing country increases the slope of $M_B$. This additional price responsiveness of trade volumes gives the expected increase in stability to the system in the presence of stocks. This is illustrated in Figure 2-10, where the “nonstock” trade curves, $X_A = S_A - D_A$ and $M_B = D_B - S_B$ are less price responsive than the stock-inclusive curves, $X_A = S_A - D_A - C_A$ and $M_B = D_B - S_B + C_B$.

It is also straightforward to incorporate stocks into the analysis of the exportation or importation of instability. If the carry-out function responds to world prices, then an exporting or an importing country will normally build
up stocks in times of adequate world supplies, and release them in times of scarcity, even if no response is forthcoming from domestic production or consumption. Unfortunately for world price stability, private stockholders usually will respond to domestic price signals rather than those on the international market. Government stocks are more likely to be world-price sensitive in these circumstances, effectively placing the government in the role of speculator but having the advantage of helping to dampen world price movements. One could, for instance, devise an “active” stocks policy which exactly offsets the negative effect on price stability of domestic fixed-price policies. More commonly, stocks policies react to domestic production fluctuations. Thus, the export of instability may well be less than in the absence of stocks. Again, the private stockholder will have little incentive to vary stocks with domestic production if prices are fixed or supported within narrow bands. The government may well engage in price-stabilizing speculative behavior by increasing stocks at times of adequate domestic supply, though this may not be “good” speculation if, at the same time, aggregate world supply is down.

IV SUMMARY

This analysis has focused on intercountry linkages through a single-commodity market. More complex links are discussed in the next chapter, taking into account the substitutability among products. The key conclusion from the analysis is that domestic policies distort the free-trade excess demand and supply curves, which in turn determine the level and behavior of the market-clearing world price. This is significant for all countries. Small countries, in the sense of their limited size in relation to world trade for a particular commodity, have to be aware of the impact that other countries’ policies have on world market conditions. For larger countries, the shape of the trade curves facing them offer the possibilities of actively using policy to enhance
domestic objectives. The responsiveness of stocks to domestic production variations and to world prices is an additional element in the stability and nature of the market. At an international level, the net effect of all countries’ policies shows up in terms of the level and stability of prices. Negotiations on trade liberalization and price stability must take this into account if they are to be meaningful. These international aspects are taken up in Part Three of this book.

REFERENCES


ADDITIONAL READINGS

