

II COHERENCE

The starting point for this study is that appropriately designed and sequenced trade liberalization measures and a well crafted set of trade rules can make a positive contribution to growth and development. But the extent of that contribution also depends on other policies. The notion of coherence has been deployed in this study to characterize a situation in which relevant policies are pulling together in the same direction. In a world of multiple policy objectives and priorities, and one where no consensus exists on the ideal policy set, the concept of coherence cannot be given operational precision – rather, it is indicative of the reality that policies are inter-dependent, and that poor policy or neglect in one area can undermine the efficacy of efforts in another.¹ Coherence cannot be uniquely defined unless a set of policy objectives is formally established and the objectives ranked in terms of priorities that indicate how trade-offs are to be made when these are necessary. A precise specification of a fully coherent policy set would also identify the exact nature and timing of all relevant government interventions. Any such undertaking is well beyond the scope of this study. Instead, coherence in this context simply refers to the idea that mutually supportive approaches in related areas of policy are likely to produce greater harmony between intent and outcome. Coherence as discussed here is a matter of degree, and more coherence means that the benefits of sound trade policies are greater than they would be without supportive policies in other areas.

Seen through the prism of ensuring the effectiveness of trade (and investment²) policy, what are the other policy areas that are most important? This study identifies four broad policy areas, each of which is analysed in relation to its impact on trade and the economy more generally. The areas covered are macroeconomic policy, infrastructure, the structure of domestic markets, and governance and institutions. The study aims to show how coherent policy in each of these areas can contribute to the attainment of trade policy goals.

The first four Sections of the study take up the policy areas mentioned above. The fifth Section then considers the question of how far international action is needed in order to ensure coherent policy-making at the national level. This discussion is rolled into a brief consideration of how the WTO can contribute to policy coherence through the provision of mechanisms for international cooperation.

The focus is on policy content and design and not on process. It should be noted, however, that the processes through which policy are conducted are also vital for coherence. For example, the ability of different ministries to work together effectively in a national setting will make a significant difference to outcomes. Poor implementation can be every bit as damaging as poor policy. Similarly, public attitudes regarding the legitimacy of policy decisions will depend on the nature of domestic policy-making processes and the degree to which individuals and groups consider they have a voice that is heard.

A INTERNATIONAL TRADE AND MACROECONOMIC POLICY

1. INTRODUCTION

Trade and macroeconomic policies are well known tools of government. What is less well known are their linkages and how they interact. Trade officials like to think of trade policy as an instrument for protecting industries or as a bargaining tool in international negotiations. In developing countries, which often have a small tax base, government officials rely on tariff revenues to finance government expenditures.

In contrast, central bank officials and officials from ministries of finance are primarily concerned about inflation, government budgets and taxation policies, respectively. Central banks typically have domestic monetary targets or inflation as their policy objectives, while the country's trade performance is only a matter of concern in terms of the foreign reserve position and/or the emergence of unsustainable current account deficits.

¹ For some interesting reflections on the use and misuse of the notion of coherence, see Winters (2002).

² This study does not discuss investment policy separately as an ingredient of coherence. This is because investment policies and trade policies are considered part of the same package defining a nation's international economic relations, and effectiveness in each of these areas will be conditioned in comparable ways by the other policies discussed here.

Important linkages exist between trade and macroeconomic performance and between trade and macroeconomic policies. Should governments seek to reduce current account deficits with the help of trade policies, for example, rather than other policies? Historically, governments have always been tempted to use trade restrictions to restore balance of payments equilibrium.³ If governments have a choice, what policies are best to achieve this objective?

Another set of relevant questions concerns movements of capital. Since inflows of foreign capital facilitate financing of current account deficits, they may indirectly affect the scope and even the conduct of trade policies. Should governments create conditions to facilitate the inflow of foreign capital, for example, or should they rather rely on domestic sources of financing? What are the concerns of governments about foreign capital as a source of financing a current account deficit? What are the advantages of more open capital markets as a policy option to maintain external equilibrium?

This Section addresses these questions. The main objective is to identify the linkages that exist between trade and macroeconomic performance and between trade and macroeconomic policies. We shall draw heavily on the existing literature with the view of providing a “roadmap” for policy makers.

Subsection 2 begins with a summary of intuitive explanations of the linkages between trade and macroeconomic conditions. This will be followed in the next subsection by a brief exposition of the framework that provides the theoretical explanations of these linkages. Subsections 4 and 5 provide a review of the relevant empirical literature. The effects of trade and trade policy on macroeconomic performance are discussed in subsection 4, and the reverse – the effect of macroeconomic performance and policy on trade – is discussed in subsection 5. Policy implications for the conduct of trade and other policies arising under conditions of disequilibrium of the external balance are discussed in subsection 6. Subsection 7 draws conclusions.

2. TRADE AND MACROECONOMICS: SOME INTUITIVE EXPLANATIONS

Trade and macroeconomic variables do not operate in a vacuum. They are strongly inter-related and inter-dependent. Before formally explaining the linkages, it may be useful to provide a few intuitive explanations of those linkages.

Broadly speaking, the linkages are of two kinds. First, macroeconomic variables, such as national income, employment, price level, aggregate investment and consumption (and hence savings), are affected by trade.⁴ Trade affects macroeconomic performance in terms of the dynamics of the economy’s growth, its stability and distribution.⁵

Imports may be used as inputs in production and, therefore, directly affect the level of output and, indirectly, demand for labour and thus employment. Imports of consumer goods reflect choices of consumers and, hence, their decisions to spend their incomes or to save. In addition, imports compete with domestic production and may displace domestic firms from the market. As a result, domestically produced output will be affected and so will income and employment - adversely, if domestic firms are unable to compete, or positively, if they become more competitive.

³ For a relevant discussion of this point, see, for example, Lawrence (1996), chapter 3.

⁴ Effects of trade on employment and the price level are indirect. Changes in employment are derived from changes in demand for labour while changes in the price level also depend on the relative changes of domestic aggregate demand and supply.

⁵ Trade and trade policy primarily act on microeconomic variables, such as productivity and efficiency of resource allocation. Although exports and imports are part of the supply and demand relationships of an economy, more complex and indirect mechanisms are at work to link them to monetary, fiscal, balance of payments and output factors. The microeconomic relationships underlying the effects of trade on macroeconomic variables are not discussed here in further detail and the interested reader may refer, for instance, to World Trade Report 2003, Section II.A.

Exports, which constitute a component of aggregate demand, stimulate growth of domestic output and hence income and employment. By expanding markets for domestic firms, exports create conditions for production costs to fall as firms benefit from economies of scale. As a result, firms' productivity will increase. Many countries have relied on exports as an "engine" of economic growth.

Second, the reverse causality – from macroeconomic variables to trade – also holds true. Domestic growth will increase demand for imports and divert resources away from production of exportables to production for domestic markets. Other things being equal, the trade balance will tend to deteriorate. By the same token, stagnating domestic demand will "push" producers to look for markets abroad. Consequently, exports will tend to grow and the trade balance will improve.

Changes in the domestic price level also have "spillover" effects on trade. Inflation lowers the competitiveness of domestic firms *vis-à-vis* foreign imports and foreign firms in external markets. Once again, imports will tend to rise, and exports fall. Consequently, the trade balance will deteriorate.

Changes in foreign prices are also important for the trade and macroeconomic performance of countries – in particular that of small countries which are inherently more dependent on international trade. Rising world prices relative to domestic prices will encourage exports and discourage imports. In addition, rising import prices will increase costs of imported inputs and may generate inflationary pressures. Rising export prices will increase the profitability of export transactions, increase cash flows of exporting firms and, hence, provide additional incentives to shift resources to the production of tradable goods. Changes in relative foreign prices affect a country's terms of trade and, thus, its balance of payments situation.

Trade is also sensitive to changes in macroeconomic policies. For example, an expansion in monetary or fiscal policy will increase aggregate spending which includes spending on imports, and influence the allocation of resources between tradables and non-tradables. Macroeconomic policies also affect the conditions in financial markets and thus the incentives for capital flows to move in and out of the country. This, in turn, is a determining factor of the amount of external resources available for financing current account deficits.

The last comment concerns the importance of macroeconomic factors for trade relative to microeconomic forces. Trade can be determined by changes in macroeconomic variables such as consumer spending or investment. If, for example, the US monetary authorities lower interest rates, domestic spending on domestically produced goods and imports will rise. Similarly, resources used in the production of exportables may be shifted to production for the home market. On the other hand, trade can be also affected by the performance of sectors or individual firms. By way of another example, US exports may expand because of new contracts signed by, say, Boeing to sell aircraft to European countries. In the latter case, the expansion takes place as a result of the success of Boeing rather than changes in macroeconomic variables or policies. The distinction between macro- and micro-economic factors needs to be kept in mind when reading the rest of the Chapter, which emphasizes the importance of the former.

3. A THEORETICAL FRAMEWORK

(a) Macroeconomic equilibrium in an open economy

Trade and macroeconomic variables are inter-related through a set of formal economic linkages. These relations form a macroeconomic system of an open economy which identifies a set of conditions necessary to maintain the economy in equilibrium (Box IIA.1). The link between trade and macroeconomic variables stems from the so-called fundamental macroeconomic identity which, in turn, constitutes the basis for a theory known as the “absorption model”. The absorption model is frequently combined with another theoretical framework known as the “monetary model” which provides a foundation for the monetary approach to the balance of payments.

The absorption model links macroeconomic variables such as consumption, savings, investment and income with the external balances (typically the current account). These relations describe the “real” side of the economy. The monetary model then links the domestic real variables with monetary variables. Some aspects of these models are controversial, but they are founded in strong theory and continue to be fundamental in the provision of policy advice, especially in the context of IMF conditionality.⁶

Macroeconomic equilibrium in a closed economy is defined as the condition when planned (*ex ante*) aggregate spending (or absorption) equals actual income (output). In an open economy, this requires that planned or *ex ante* investment equal the sum of the savings of the private sector, the public sector and the amount of savings foreigners are making available to domestic residents or the government. Thus, in an open economy, macroeconomic equilibrium has two components: the first is internal balance, related to domestic goods, financial and labour markets. Equilibrium is typically defined as output at full or near full employment.⁷ The second component is external balance which is defined in terms of a sustainable current account balance and its financing. In real world situations, this implies a judgment about sources of external financing and the sustainability of the country’s external debt.⁸

Combining both elements in addressing the issue of current account balances, it follows that:

- The level of current account imbalance directly reflects the difference between national income and national spending. An excess of national spending over national income is only possible in the presence of the corresponding deficit on the current account. Conversely, an excess of national income over national spending leads to domestic “savings” which are channelled into an excess of exports over imports (a current account surplus).
- In the absence of capital flows, a current account deficit is only possible by running down foreign reserves or foreign borrowing by the banking system. In the absence of reserves or foreign borrowing, a balance in the current account can only be achieved through adjustments of domestic macroeconomic variables.

⁶ It may be useful to quote Michael Mussa, the former IMF Chief Economist: “In this connection it is a well known (and often cited) conclusion reached by Richard Cooper at a 1982 conference on IMF conditionality, namely, that any five people chosen randomly from a diverse group of participants at the conference would, if confronted with an external crisis from a position of authority, produce an adjustment program ‘that would not differ greatly from a typical IMF program’, seems as pertinent and valid today as it was then.” (Mussa and Savastano 1999, p.22).

⁷ The Keynesian concept of unemployment is sometimes accepted as a part of the definition and reflects difficulties in moving to a “full employment” level due to market imperfections or the workings of “money illusion”. In either case, an expansion of aggregate demand will not lead to an increase in output, but to inflation. More frequently, however, internal balance is defined in terms of “potential” output, i.e. output that can be reached at full capacity.

⁸ Note also that the model assumes the absence of foreign currency restrictions on current account transactions, a situation that is quite common in many developing countries. Thus, changes in the current account reflect changes in domestic relative prices, changes in the terms of trade, and changes in domestic monetary conditions. In the presence of foreign currency restrictions, external “balances” are achieved by foreign exchange rationing.

Box IIA.1: The monetary model of balance of payments

The role of monetary and fiscal policy in restoring and preserving external balance can be better understood with the help of theoretical models based on or consistent with the “absorption approach” to balance of payments. The latter, in turn, is based on the fundamental macroeconomic identity elaborated further below. One of these models – arguably the best known – is the monetary model.¹

The IMF monetary model contains the following elements (among others):

$$dM = dR + dDC \quad (1)$$

Identity (1) states that the change in the money supply (dM) is by definition equal to the change in the country's foreign reserves (i.e. net foreign assets) (dR) plus the change in the domestic credit of the banking system (dDC).

$$dR = X - IM - NF + dK \quad (2)$$

Identity (2) states that the change in foreign reserves (dR) is by definition equal to exports (X) minus imports (IM) of goods and services minus net factor payments and current transfers (NF) plus net foreign capital inflows of the non-bank sector (dK).

The link between monetary and fiscal policies with external accounts is established through the “fundamental macroeconomic identity”. Defining first

$$Y = GDP - NF \quad (3)$$

$$GDP = C + I + (X - IM) \quad (4)$$

$$A = C + I \quad (5)$$

$$CAB = X - IM - NF \quad (6)$$

where, Y — gross national disposable income,
 A — domestic absorption (consumption C and investment I),
 CAB — current account balance of BOP,

and substituting (4), (5), (6) into (3) gives the following “fundamental macroeconomic identity”:

$$Y = C + I + (X - IM) - NF \rightarrow Y = A + CAB \text{ and thus, } CAB = Y - A \quad (7)$$

The current account balance (CAB) is a difference between country's income (Y) and domestic absorption (A). Equation (7) also highlights that the current account shows a surplus if income is greater than domestic absorption and a deficit in the reverse case. So the CAB deficit can be reduced by a decline in absorption (relative to income) or by an increase in income (relative to absorption).

Now, combining equations (7) and (2) we obtain

$$dR = Y - A + dK \quad (8)$$

which shows that if the excess of domestic absorption over income is not financed entirely by inflows of foreign capital this will lead to a rundown of the net foreign assets of the banking system.

Equation (1) can be rearranged so that it relates the change in net foreign assets to the difference between change in money supply (dM) and the change in domestic credit (dDC):

$$dR = dM - dDC \quad (9)$$

Equation (9) shows that foreign reserves decline to the extent that the change in the total money stock is less than the change in domestic credit. Combining equations (7), (8) and (9) gives

$$Y - A + dK = dM - dDC \quad (10)$$

Thus, the excess in the change of domestic credit over the change in money stock will be equal to the current account deficit (assuming no net inflow of foreign capital).

¹ For more details see, for example, Polak (1997).

(b) Macroeconomic instability: shocks and unsustainable current account deficits

It is customary to discuss the nature of current account imbalances in terms of four themes.⁹ The distinctions are important because they determine the way in which countries can respond to the emergence of current account deficits and the way in which they will design their policies. The themes are: (i) origins of current account deficits; (ii) channels of transmission; (iii) persistence of current account imbalances; and (iv) timing and sequencing.

Three of these themes will be discussed under the subheadings that follow. The fourth, which concerns timing and sequencing – the speed with which policymakers should respond to external balances and in what policy sequence – raises complex questions. How quickly, for instance, can adjustment measures be taken and made effective? Should policies be taken in a particular sequence? For example, should capital accounts be opened only after a period of stable and unrestricted foreign currency transactions on the current account? What role should trade liberalization play as a part of adjustment programs? Should liberalization be taken as a part of the adjustment program or should it be postponed? What are the merits of immediate response as opposed to delays? The trade policy aspects of these questions will be referred to further in various contexts from subsection 4 onwards.

(i) *Origins of current account imbalances*

Current account imbalances may have two different origins – internal or external. External shocks are, for example, terms of trade changes, new restrictions on market access, the collapse of markets,¹⁰ volatility of commodity prices or changes in interest rates. Internal shocks include a drop (change) in domestic investment or consumption, a change in savings habits, a change in domestic competitiveness or productivity in particular industries, or a change in government fiscal policies (spending and revenues).

Several studies show that the origins of disturbances to internal and external balances vary but that domestic origins dominate. This presumption has also been formally tested in studies, such as the ones conducted by Glick and Rogoff (1995) and Prasad and Gable (1997). Moreover, even if the shocks are of external origin and imbalances emerge, governments will most likely still have to respond with domestic policy measures.

(ii) *Channels of transmission*

While theory is quite clear about the economic relationships (Box IIA.1), it does not provide an obvious explanation of the mechanism through which the link between macroeconomic conditions and policies and trade works.¹¹ There are several channels of transmission. One is the financial sector. For example, inflation can be highly detrimental to the process of investment selection and trade specialization. Firms are likely to find it easier to obtain bank credit during an inflationary period provided they are operating in a growing market even though they may not be operating in segments of the markets in which the country has a comparative advantage. As Corbo et al. (1992) put it, the relative price variability that typically characterizes high-inflation environments is not conducive to the realization of the efficiency benefits generally expected from the removal of price distortions, such as tariffs, which, in turn, distort investment decisions.

Similarly, when the financial sector is under stress, banks may be particularly keen on borrowers who are willing to pay the highest rate of interest, even though they may be high risk. This “adverse selection” of clients as well as the problems arising from an inflationary environment could distort the pattern of the country’s specialization and hence the dynamics of trade growth. In this case, the transition channel of domestic instability is also the financial sector.

⁹ See, for example, Calderon et al. (2003) who also provide a brief review of the relevant literature.

¹⁰ For example, the collapse of the so-called COMECON market which resulted in a virtual disappearance of the traditional markets for Central and East European exporters in the early 1990s.

¹¹ The theoretical models discussed in the previous subsections analyse the relationships in the context of comparative statics defining two points of equilibrium without explaining the path along which the adjustment takes place.

Another important channel of transmission is the exchange rate market. Eichenbaum and Evans (1995), for example, suggest that exchange rates are primarily determined by monetary policies. Macroeconomic instability may result in large swings in expenditures and prices which, in turn, will lead to changes in foreign currency markets, pressures for exchange rates to adjust and, consequently, changes in trade flows. Their findings are in contrast with most of the literature which typically relates movements in nominal and real exchange rates to business cycles.¹² It is interesting to note that trade policy may also be a domestic factor affecting exchange rates. A study of Hau (1999), which draws on a sample of 54 countries, concludes that cross-country variations in the volatility of the effective real exchange rate can be explained by differences in trade openness.¹³

Monetary shocks, like other domestic shocks, can have different origins. In many developing and transition countries these monetary shocks often come from central bank financing of fiscal deficits. For a variety of reasons these countries' abilities to tax are often heavily limited, and not in line with their governments' propensity to spend.

(iii) *Persistence of current account imbalances*

High and rising current account deficits pose a serious threat to an economy. They reflect domestic imbalances which ultimately will have to be restored. This would require an appropriate domestic adjustment. The adjustment may take place automatically in the market place. Alternatively, the adjustment may require changes in government policies. The risk of large current account deficits is that they may become "excessive" as investors lose confidence and demand repayment or re-financing of loans and/or as countries lose foreign currency reserves. In brief, some current account imbalances are sustainable, others are not.

The distinction between persistent and transitory current account deficits primarily arises from the difference between permanent and transitory shocks. The question has been raised as to whether this distinction has implications for the way in which current account balances change. It is possible to argue, for example, that a persistent decline in terms of trade (due to, for example, a collapse of commodity prices) will widen the current account deficit because people are more likely to increase savings and, hence, reduce consumption as a short-term phenomenon rather than on a persistent basis. On the other hand, as argued by Obstfeld and Rogoff (1995a), transitory productivity shocks may move the current account into surplus, but may not be accompanied by a growth in investment reflecting responses of investors to new opportunities generated by the growth of productivity.

The nature of shocks – i.e. whether they are persistent or transitory – affects both the "investment" side of the macroeconomic balance as well as "savings". As the study of Obstfeld and Rogoff (1995a) above indicates, the shocks of productivity changes – as an example – may affect investment decisions. The critical question for policy makers is whether these shocks lead to a permanent change in savings behaviour or not. A transitory increase in productivity will not be translated into a permanent improvement of the current account balance while a permanent increase in productivity will have that result.

The nature of shocks will affect the way in which economic agents respond to these shocks and decide whether the current account deficit can be financed by running down reserves or by borrowing, or whether an adjustment is necessary to restore external balance. The academic "wisdom" would suggest that temporary imbalances should be financed by borrowing or lending depending on the nature of the imbalance. Permanent imbalances should be addressed by adjustment through policy changes. Thus, the challenge for policymakers is to manage shocks with the appropriate balance between discretion and recourse to policy rules. Part of this challenge, for all economies, is to avoid overreacting when correcting macroeconomic imbalances.

¹² See, for example, Frankel and Rose (1994). However, Eichenbaum and Evans' findings were supported by Prasad and Gable (1997) who conclude that nominal shocks, such as monetary expansion, tend to improve the trade balance in the short run.

¹³ The flow of causation can be reversed under conditions of an overvalued exchange rate. Disequilibrium exchange rates can lead to changes in trade policy. See Drabek and Brada (1998).

4. Is trade important for macroeconomic performance?

The linkages between trade and macroeconomic conditions and policies that are firmly established in theory are also supported by empirical evidence. The linkages have been studied in two separate ways. Most of the studies have looked at the impact of trade and trade policies on macroeconomic performance. An alternative approach has been to study the role of macroeconomic variables and policies as a determinant of trade. This subsection looks at the former – the linkage from trade to macroeconomic performance while the reverse relationship is discussed in the next subsection.

Since macroeconomic performance can be defined in different ways, the empirical literature covers a variety of issues. Most studies have looked at the impact of trade policies and the degree of market openness on economic growth. Other studies have examined the impact of trade policy on income distribution and poverty. But there are also other relevant effects of trade with macroeconomic implications. These include, in particular, the effects of trade on the domestic price level and inflation.

The evidence on the two types of linkages noted above is provided in Table IIA.1. The Table is organized into three panels. Panel A provides evidence on the effect of trade on economic growth. The Table also includes a list of variables linked to macroeconomic policies and other macroeconomic factors that were identified in each model reported in the Table. The dependent variables were alternatively defined as GDP per capita, income per capita and poverty.¹⁴ Panel B summarizes selected empirical evidence on the impact of macroeconomic variables and policies on trade. In addition, the management of trade and current account balances is critically dependent on the availability of external funds. Table IIA.1 includes, therefore, a brief summary of studies that investigate the importance of macroeconomic conditions and policies on the supply of foreign capital and on the availability of foreign assistance. These studies are reported in Panel C. The coverage in each panel is not exhaustive but the selection of studies is believed to be sufficiently representative.

¹⁴ Perhaps the most debated linkage discussed in the literature is the effect of trade on aggregate income. Numerous studies have been carried out on the effect of trade policies (typically trade liberalization) on economic growth, income distribution, poverty and other economic and social indicators. However, these are not all included in Panel A due to limitations of space. Another reason is that we concentrate on effects which have a relatively short-run horizon. Other issues such as the link between trade and sustainable economic growth – which is a long-term relationship – far exceeds the domain of macroeconomic policy.

Table IIA.1
Trade and macroeconomic conditions - selected empirical evidence

Panel A. Impact of Macroeconomic Conditions and Trade on Growth

Authors	Dependant variable	Total of variables	Trade policy variables	Number of statistically significant variables		Comments on estimated parameters of macroeconomic variables ¹
				Macro conditions	Macro policy	
Rodriguez and Rodrik (1999)	TFP Growth	10	9		1	<i>Macro policy:</i> collected tax ratio
Collier and Dehn (2001)	growth rate of per capita GDP	21	-	2	-	<i>Macro conditions:</i> (all with weak significance) Initial GDP, M2/GDP
Burnside and Dollar (1997)	growth rate of per capita GDP	15	1	3	2	<i>Trade policy:</i> openness <i>Macro conditions:</i> initial per capita GDP, M2/GDP (weak), inflation <i>Macro policy:</i> (all with weak significance) budget surplus, Gov. consumption
Arteta, Eichengreen, Wyplosz (2001)	average growth rate of per capita GDP	7	1	1	1	<i>Trade policy:</i> Quinn's index <i>Macro conditions:</i> per capita GDP <i>Macro policy:</i> investment ratio
Borensztein, Gregorio, Lee (1995) I	growth rate of per capita GDP	8	-	1	2	<i>Macro conditions:</i> Initial GDP <i>Macro instruments:</i> (low significance) Gov. consumption, FDI
Borensztein, Gregorio, Lee (1995) II	growth rate of per capita GDP	8	-	1	2	<i>Conditions:</i> Initial GDP <i>Macro instruments:</i> (low significance) Gov. consumption, FDI
Dollar and Kraay (2001) I	growth rate of per capita GDP	8	-	3	4	<i>Conditions:</i> Initial income, trade volume, inflation <i>Macro instruments:</i> (low significance) Investment/GDP, FDI, Gov. consumption/GDP, Contract-intensive money
Dollar and Kraay (2001) II	Ln (per capita Income of the bottom quintile)	6	-	4	1	<i>Conditions:</i> Commercial Bank Assets/Total Bank Assets, ln (per capita GDP), (Exports + Imports)/GDP, Inflation <i>Macro policy:</i> (low significance) Gov. consumption/GDP
Dollar and Kraay (2002)	Incomes of the poor	6	-	3	2	No information about number of dummies <i>Macro condition:</i> (low significance) (export + import)/GDP
Edison, Klein, Ricci, Sloek (2002)	Growth in per capita income	10		2		<i>Conditions:</i> growth in per capita income, average investment

¹ This column identifies the set of macroeconomic and trade variables used in corresponding papers.

Panel B. Impact of Macroeconomic Conditions on Trade (Trade Determinants)

Authors	Dependant variable	Total of variables	Trade policy variables	Number of statistically significant variables		Comments
				Macro conditions	Macro policy	
Catao and Falcetti (2002) II	Log (exports)	5	-	2	1	<i>Conditions:</i> Aggregate capital stock; GDP growth in partner countries, foreign price index <i>Macro policy:</i> Real domestic absorption
Catao and Falcetti (2002) III	Log (imports)	4	1	3	-	<i>Trade policy:</i> import tariff rate <i>Conditions:</i> real gross domestic product, consumer price index deflated by nominal exchange rate, real interest rate
Frankel and Rose (2000)	Log (bilateral trade)	14	1	2	-	<i>Trade policy:</i> presence of Free Trade Arrangements <i>Conditions:</i> real GDP and real GDP per capita

Panel C. Impact of Macroeconomic Conditions and Trade on Supply of External Financing

Broadman and Recanatini (2001)	FDI in Russia	10	1	1	1	—
Boone (1995)	AID/GNP	17	1	5	-	Terms of trade debt rescheduling (low significance)
Alesina and Dollar (1998)	Ln (bilateral aid) Ln (FDI)	13	-	1	-	Initial income and (initial income) are counted as one variable
Singh and Jun (1995)	Real FDI	11	1	5		<i>Trade policy:</i> <i>Conditions:</i> real GDP, real GDP per capita,
Dasgupta and Ratha (2000)	IBRD flows to country/GDP	8	-	5	2	<i>Conditions:</i> world trade/world GDP; Net Non-FDI flows/GDP; Growth rate of world GDP; Growth rate of developing country GDP; LIBOR (3-month, real); <i>Macropolicy:</i> Net official flows/GDP

(a) Trade and economic growth

As noted above, macroeconomic conditions and performance are affected by trade in different ways. Exports are a component of aggregate demand and are, therefore, a factor in economic growth. For example, Prasad and Gable (1997) show that exports of OECD countries served as a catalyst in all economic recoveries, and this positive effect was further correlated with the degree of the economy's openness to international trade. Furthermore, as Table IIA.1 shows, all studies under review testify to the importance of trade for economic growth. The studies of Dollar and Kraay (2001), Burnside and Dollar (1997), Arteta, Eichengreen and Wyplosz (2001), an earlier review of the literature by Edwards (1993) and others show that trade openness is a (statistically significant) variable in explaining differences in economic growth of countries. Moreover, each of the models in the Table included macroeconomic variables that co-determined the explanation of growth performance. For example, the study by Burnside and Dollar includes up to five different macroeconomic factors as explanatory variables out of the total number of 15 used in their estimations. All five variables were statistically significant. Even the critics of the mainstream literature¹⁵ treat macroeconomic conditions as critical explanatory variables. In brief, macroeconomic conditions together with open trade policies and other factors are found by most economists to be the critical in explaining faster economic growth.

However, the conclusion is controversial in at least one important theoretical sense. The critics such as Rodriguez and Rodrik (1999) argue that the flow of causation is not from trade and trade policy to domestic (macroeconomic) performance but the reverse. What matters is domestic investment, which is a component of domestic aggregate demand and, therefore, a macroeconomic component. It is domestic investment which leads to a build-up of production capacities and growth of productivity and, hence, enhanced competitiveness of domestic firms in the face of foreign competition. Somewhat different reasoning is offered by Frankel and Rose (2000), who criticize the arguments of the mainstream literature on the grounds that trade policy cannot be treated as an exogenous variable (as it is in the models reported in Panel A of Table II.A.1). They suggest that trade policy could in fact be seen as being determined simultaneously with domestic policies, including macroeconomic policies.

(b) Trade and "imported inflation"?

Imports of intermediate inputs represent a factor of economic growth but they can also de-stabilize domestic economies through price changes and/or competitive pressures on domestic producers of competing products. In general, imports compete with domestic production and influence the way domestic resources are used in stimulating efficiency gains. In brief, trade is another channel of transmission of domestic and external shocks – leading to real or price effects.

How much of import price changes are reflected in higher domestic costs depends on the share of imported inputs in total production costs, the way imported inputs are priced,¹⁶ and the tightness of the link between import prices and exchange rates. The tighter the link between import prices and exchange rates, the greater the dependence of exchange rate volatility on the movements of import prices. The latter is particularly important for countries which depend on commodity trade. As shown by Cuddington and Hong Lian (1998), the volatility of real commodity prices is much higher under flexible exchange rate regimes than under fixed exchange rate regimes. Ultimately, however, the link between rising import prices and domestic inflation is determined by the reaction of monetary authorities – whether they will accommodate the increased nominal demand for imports by increased money supply.

¹⁵ For example, Rodriguez and Rodrik (1999).

¹⁶ Recent debates about pricing methods deal primarily with producer currency pricing and local currency pricing principles. For an estimate of how these rules may affect the transmission of price changes see Campa and Goldberg (2002) who use an example of OECD countries. The authors show that across the OECD countries import prices had been only partially passed through. Moreover, higher inflation and exchange rate volatility were only weakly associated with higher pass-through of exchange rates into import prices.

(c) Trade liberalization and fiscal revenues

Another linkage is the effect of trade and trade policy on government savings. Changes in trade and trade policy lead to changes in tariff revenues and therefore to changes in budgetary revenues, thereby affecting the ability of governments to mobilize resources (savings). Growth of imports will lead to growth of tariff revenues. Similarly, a reduction in tariff rates will lead to a reduction in tariff revenues unless the reduction is offset by increased demand for imports and more efficient tax design and implementation. In theory, it is possible to replace any revenue lost as a result of tariff cuts. This replacement might come, for example, from effective reform of the indirect tax system. Such reforms might include adoption of a value-added tax, an improved tax administration, or a reduction in excessive tariff peaks. Moreover, a reduction of tariffs is likely to lead to increased import volumes and possibly increased tariff revenues, as well as reduced smuggling.

As shown in a number of studies, trade liberalization may have an adverse impact on fiscal revenues in countries which are heavily dependent on tariffs as a source of government revenues. Ebrill et al. (1999), for example, show that non-OECD countries collected about 15 per cent of the value of imports between 1975 and 1990.¹⁷ In some developing countries, budgetary revenues are still heavily dependent on taxes imposed on international trade. This could be a more serious problem for countries with a small domestic tax base, low efficiency of tax collection or poor design of the tax regime. However, the trend in many developing countries has been to lower budgetary dependence on taxes on external trade.¹⁸

5. IS MACROECONOMIC PERFORMANCE IMPORTANT FOR TRADE?

The empirical evidence of the effects of macroeconomic factors on trade is scarcer and relatively more recent. The literature has addressed two main aspects of macroeconomic performance – the effects of economic growth on trade and economic cycles and their influence on trade flows. Particular attention has been given to studies of the effects of economic recessions and macroeconomic instability on trade.

(a) Economic recessions and trade policy

The effects of economic growth on trade are both short-term and long-term. Short-term effects include changes of imports typically as a result of changes in the level as well as composition of domestic expenditure due to changes in relative commodity prices. Long-term effects of economic growth reflect changes in technological conditions of production as well as more permanent changes in demand. These long-term effects are perhaps least researched and understood.

In contrast, the best known studies of the effects of economic growth on trade have been studies of economic recessions.¹⁹ These effects are both direct and indirect. The direct effects come from real reductions of aggregate demand and inflation while the indirect effects originate in increased pressures for protection on the part of domestic firms from foreign competition. Moreover, increased protection in one country may lead to retaliation and hence to beggar-thy-neighbour responses in other trade partners. The onset of the extreme case of recession of the 1930s was marked by the adoption of those policies, as countries erected trade barriers to insulate domestic producers from foreign imports in the face of falling domestic demand. Ironically, protectionism worsened domestic deflation and deepened and lengthened the depression. This episode underscores the huge risks posed for international trade by sharp falls in domestic demand.

¹⁷ For more recent figures see, for example, WTO (2003a). The study confirms that many developing countries continue to collect large revenues from international taxes.

¹⁸ For recent data concerning the countries in Latin America (and selected OECD countries), see IDB (2004).

¹⁹ Broadly speaking, "economic recessions" could be also interpreted as elements of macroeconomic instability.

Another well-researched aspect of economic growth and its effects on trade is the link between growth of output and growth of demand for imports in the short-run. These studies point to the positive impact of growing domestic demand on demand for imports. The elasticity with which domestic firms and households respond to changes in their disposable incomes typically varies according to the nature of commodities ranging from very low levels for commodities such as fuels, energy or food to high levels for commodities such as fashion or luxury goods. Changes in aggregate domestic demand may also affect exports in the short-run, although the actual response function will depend on the specific conditions of countries. In some countries, exporters respond positively to a decline in domestic sales as they seek alternative markets, while exporters have been much slower to react in others.

(b) Effects of real and monetary shocks

As noted above, the most powerful channel of transmission of macroeconomic shocks to trade is through foreign currency markets and, therefore, through volatility of exchange rates and the domestic price level. In addition, nominal domestic shocks can come from changes in monetary policies which are transmitted through financial markets. The second stream of empirical literature, therefore, focuses on the study of both short-term and long-term effects of nominal (monetary) shocks on trade.

Inflation is detrimental to trade for several reasons. Inflation generates uncertainty which can lead to misallocation of resources whenever investment decisions distort the allocation of resources between tradables and non-tradables. Unstable and, therefore, unpredictable rates of rising prices will discourage investment. Very high rates of inflation may even lead to a flight of investors from financial and productive assets to safer markets. Inflation can also provoke calls for more protection from foreign competition as the existing level of protection is eroded by rising domestic prices.

The empirical literature of business cycles has focused on three separate approaches. One approach has been to assess the importance of common international shocks relative to country-specific or industry-specific shocks. Another approach has been to assess the role of international trade as a transmission mechanism for shocks originating in business cycles. Finally, the dynamics of linkages between trade and business cycles have been simulated in dynamic general equilibrium models.²⁰

In general, the studies confirm that both exchange rate and domestic price stability are strongly correlated with trade performance and external imbalances. As already noted, the study of Prasad and Gable (1997) shows that monetary expansions tend to result in short-run improvements in trade balances. Studies of business cycles and their effects on trade also show that international variations in output are strongly correlated and that trade acts as a transmission channel. Lumsdaine and Prasad (1997), for example, find that fluctuations in industrial production have strong and positive correlation with a common component of international fluctuations.²¹

The volatility of the exchange rate and the price level is a particularly powerful factor in explaining trade performance.²² Trading partners with low rates of inflation tend to trade more intensively with each other and are more integrated than countries that have experienced high rate of volatility in the rate of inflation (Wyplosz 2003). Countries that experience a great deal of exchange rate volatility also tend to be less integrated (Rose 2000). Frankel and Rose (2000) and, more recently, Parsley and Wei (2003) take the point even further when they argue that countries joining a currency union in which the member countries' exchange rates are fixed and supported by monetary authorities stimulate trade as much or more than free trade arrangements.²³

²⁰ For more details, bibliography and a brief review of the literature see Prasad (1999).

²¹ However, it is interesting to note that in their earlier paper, Prasad and Gable (1997) did not find much contribution from variations in trade balances to cyclical recoveries of industrial economies in the course of the 1970s to 1990s.

²² As already noted earlier, exchange rates are determined simultaneously by factors that originate in domestic and external conditions. However, domestic factors are crucial, as we also argued.

²³ The IMF has also been concerned about the impact of different exchange rate regimes on trade flows. Their recent studies have not been entirely conclusive in order to confirm the fairly widely shared beliefs that exchange rate volatility is detrimental to trade. See Clark et al. (2003). This suggests that further empirical tests are still needed.

We have also carried out a simple econometric test to provide additional evidence of the importance of macroeconomic stability on trade, and the results are reported in Box IIA.2. Countries which experienced greater output volatility were also more likely to have a lower average trade growth. These results suggest that macroeconomic instability can be detrimental to the growth of trade and hence to economic growth, as a slower growth of trade “feeds into” slower domestic production and growth of incomes.

Box IIA.2: Trade and macroeconomic stability: an econometric experiment

To test the importance of macroeconomic stability for trade a multivariate regression controlling for changes in trade barriers was carried out.¹ Using data on 114 countries, we regressed the average annual rate of real growth of imports against average GDP growth, average MFN tariff rates and the standard deviation of GDP growth for the period 1980-2000. The standard deviation of GDP growth is expected to be a reasonable proxy for macroeconomic volatility. The key feature of the model is the dependence of the growth of countries’ imports on growth of their GDP, on the level of import restrictions and – to test the importance of macroeconomic volatility – on volatility in the growth of their GDP.

Data on average growth of import volume was available from the WTO for only 57 countries (half of the sample). For the other half, data on nominal dollar imports were used and deflated by the US GDP deflator. GDP growth rates from the World Development Indicators were used to calculate the average and standard deviation of growth over the period. Given the lack of data on average MFN tariffs for the 1980-2000 period, recent average MFN tariff rates from WTO (2003a) were used instead.

The regression results are shown in the Table below. All three explanatory variables have the right signs and are highly significant. As expected, the results confirm that import growth depends positively on GDP growth but negatively on the magnitude of tariff barriers and the volatility of GDP growth. Countries which experienced greater output volatility were more likely to have lower average trade growth. On average, import growth was reduced by 0.32 per cent for every one per cent increase in the standard deviation of GDP. The R^2 reported is also reasonably high given the cross-sectional nature of the data.

Regression Result: import growth and macroeconomic instability

Variable	Estimated Coefficient	T-Statistics
Constant	1.18	1.61
Average GDP Growth	1.14*	11.55
Average MFN Tariff	-0.14*	-4.24
Standard Deviation of GDP	-0.32*	-3.81

$R^2 = 0.64$ *denotes significant at the 1% level

¹ The test does not take into account the simultaneity which must be suspected in the model for reasons discussed in the text. Due to the paucity of data, no account has been taken of tariff reductions over time. In addition, the results are undoubtedly affected by the size of countries and their weight in the data sample. However, we were unable to normalize our equation, once again, due to data problems. Moreover, the regression uses current values of variables even though time lags are probably also operative.

6. POLICY RESPONSES TO EXTERNAL DISEQUILIBRIUM

In subsection 3, the main elements of the theoretical model that explains the linkages between trade and macroeconomic variables have been outlined. The discussion in the text and in Box IIA.1 identified the conditions necessary to maintain internal and external equilibrium. In this Section, the main policies that lead to a restoration of external equilibrium will be discussed.

Policy makers face three critical questions whenever they fear that the country's external imbalances are no longer sustainable. These are:

- *"Finance or adjust"?* Consider a situation with a current account deficit. The first critical question faced by policy makers is whether the deficit can be financed externally by external borrowing, foreign direct investment (FDI) or other kinds of foreign capital or by running down the country's reserves. The recourse to external financing is particularly attractive for countries whenever fiscal adjustment would generate further shortfalls of private savings, or whenever the deficit is seen to be generated by transitory factors. If the deficit cannot be financed from external sources, or by foreign currency reserves, a domestic adjustment will be necessary to bring the current account into equilibrium. Moreover, as already noted above, academic "wisdom" would suggest that temporary imbalances should be financed by borrowing or lending depending on the nature of the imbalance. Permanent imbalances should be addressed by adjustment through policy changes.
- *"Automatic adjustment or policy-induced adjustment"?* Domestic adjustment to internal or external shocks can take place in market economies either spontaneously and automatically or with the help of government policies. The former typically requires that markets are efficient and without distortions. Otherwise, the latter will apply. For example, wage rigidities in labour markets will prevent labour markets from clearing and will lead to unemployment. Distortions will also make exchange rate policy ineffective as changes in exchange rates will lead to offsetting changes in real wages.
- *"If policy-induced adjustment, what adjustment and what policies"?* If the imbalance originates in external shocks, nothing can be done to address directly the origins of these shocks.²⁴ The case is different with regard to internal shocks – for example, governments can typically either reduce domestic absorption or address structural constraints on economic performance, or both. However, with the exception of measures directed towards a reduction of aggregate spending, most other policy measures will take time to be effective. This is the reason why measures of macroeconomic policy which target domestic components of aggregate demand will, in fact, be crucial in the presence of external imbalances.

(a) Trade policy and balance of payments adjustment

When the government policy objective is the restoration of external equilibrium, trade policy measures to restrain imports are highly inefficient and inappropriate. As elaborated in the earlier writings of Machlup and Corden, the use of tariffs and other border measures to restrain imports is not only asymmetrical in that tariffs only directly affect one side of trade – imports, but they also provide the "wrong" incentives for exporters. Thus, a tariff on imports will not only reduce demand for imports but it will also increase the price of inputs used in the production of exportables – exactly the opposite effect that would be needed to improve the balance of payments. Furthermore, a tariff will encourage the production of importables rather than the production of those commodities that are competitive in world markets. The effect of tariffs as an instrument of balance of payments policy is in direct contrast to the effects of a flexible exchange rate regime which is discussed below. In sum, the use of border measures for balance of payments purposes is highly inefficient, welfare-reducing and in the long-run ineffective.

²⁴ For example, the government will hardly be able to reverse the decision in the short-run if other countries also impose trade restrictions on the country's exports. It will also be unable to reverse changes in the terms of trade.

Nevertheless, some developing countries have relied in the past on trade policy as part of their stabilization programs for different reasons – most notably to finance fiscal expenditures. As we have already noted above, the main reasons are the small tax base and the highly inefficient tax regimes which have made governments rely on tariffs as important sources of government revenues. Trade policy is, therefore, often seen as threatening government revenues and thus public savings.²⁵

Except in highly unusual circumstances, trade liberalization has been a part of many adjustment programs with or without IMF support. The main justification for this approach is the attempt to remove distortions that are generated by trade protection and to improve allocative efficiency. Furthermore, in order to minimize the costs of trade liberalization, which may lead to lower import prices and thus surges of imports, the adjustment packages typically emphasize the need for appropriate changes in the exchange rate (devaluation). The latter will increase the costs of imports and thus offset the adverse impact on domestic industries from more open markets.²⁶ Moreover, the combination of trade liberalization and exchange rate adjustment are preconditions for avoiding trade policy slippages (reversals) later on.

(b) Exchange rate policy

A more straightforward method of balance of payments adjustment exists under a flexible exchange rate regime. No capital movements need to take place in the presence of a current account imbalance because the imbalance is automatically redressed by changes in the exchange rate. These changes will take place as soon as there is excess demand for or excess supply of foreign currency. Thus, in the presence of a relatively faster growth of imports over exports, the supply of foreign currency in foreign exchange markets dominated by trade transactions will not be sufficient to satisfy the current demand for foreign currency. The price of foreign exchange will rise and vice-versa in the presence of a current account surplus.

The exchange rate adjustment will “do” two things: first, it will change the relative price of foreign goods in terms of domestic goods.²⁷ For example, a devaluation of a currency will increase the price of imports relative to domestically produced goods which will tend to depress the demand for imports. In contrast, devaluation will increase the competitiveness of domestic goods abroad and thus encourage production for exports. A revaluation of the currency will have the opposite effect.

Second, a change in the exchange rate implies a change in the price of tradables relative to non-tradables.²⁸ This change in domestic relative prices will lead not only to changes in the growth of exports and imports but also to changes in the patterns of domestic consumption and investment. In other words, changes in relative prices will lead to a domestic adjustment in two important macroeconomic variables – consumption and investment.²⁹

If external balance is the sole government objective, a flexible exchange rate system is preferable to tariffs. Exchange rate adjustments are symmetrical in that they affect both the demand for imports and incentives to exports.³⁰ However, government authorities are typically concerned not only about external but also about

²⁵ Go and Mitra (1998).

²⁶ This issue is discussed in more detail in the following Section.

²⁷ More precisely, a change in the exchange rate will change the relative price of tradables in terms of non-tradables. Thus, for example, a devaluation will increase the competitiveness of domestic producers relative to foreigners which will provide incentives to move resources to export activities and to activities replacing imports. It is for this reason that we refer to the exchange rate as the price of tradables relative to non-tradables.

²⁸ See the previous footnote for details.

²⁹ The effectiveness of exchange rate policies is based on the assumption of instantaneous adjustment in different markets. If the adjustment is “sluggish” in goods markets – a frequent phenomenon – while financial markets adjust fast, the change in the exchange rate can lead to “overshooting” in relation to its equilibrium value. See Dornbusch (1976).

³⁰ This conclusion is not shared by all economists. Proponents of the “monetary approach” to balance of payments argue that devaluation can at best only be effective in the short-run. They argue that over time, devaluation will lead to a trade surplus and growth in the money supply, which will increase the price level and reduce competitiveness. However, this outcome is very unlikely mainly in view of the fact that devaluations typically take place under conditions of unemployment and spare production capacity. Moreover, the monetary authorities are likely to intervene and sterilize the excessive growth of money stock.

internal equilibrium. A problem of devaluation as a policy instrument is that a depreciation of the currency leads to a decline in real incomes expressed in foreign currency and to upward pressure on production costs expressed in domestic currency.

While there is a consensus among economists that the exchange rate is the best instrument to restore external equilibrium, there is nevertheless a continuing debate about the choice of exchange rate regimes. The debate is about which exchange rate regime is more suitable and effective in order to restore macroeconomic equilibrium and stability. The debate is further complicated by the fact that exchange rate regimes are better characterized as varying across a continuum rather than being dichotomized into fixed and flexible. In looking at various exchange rate regimes, Frankel (1999), for instance, has identified different arrangements: currency union, currency board, “truly” fixed rate, adjustable peg, crawling peg, basket peg, target zone or band, managed float and free float.

The case for fixed exchange rates is that it provides an anchor for monetary policy, i.e. predictable policies that maintain stable price levels, and avoids the transactions costs of multiple currencies in international transactions, whether for trade or capital movements. The arguments for flexible exchange rates are that they give domestic monetary authorities independence, they better insulate the economy from real shocks and they constitute a less disruptive adjustment mechanism in the face of nominal rigidities. The long-run evidence seems to suggest that fixed exchange rates produce lower average inflation rates but there is no systematic relationship between economic growth and the exchange rate regime.

In the past decade, the trend has been towards the adoption of either end of the exchange rate continuum. Countries either choose a currency union (or some form of truly fixed peg) or a freely floating rate. This is because countries with open capital accounts have found that intermediate exchange rate arrangements “are crisis-prone and not viable over long periods”.³¹ In the aftermath of the Asian financial crisis, the policy prescription given to developing countries has been similar. The idea is to avoid an intermediate arrangement, neither fully fixed nor fully flexible, that can be the subject of speculative attack. This is based on the argument that real exchange rate overvaluation, which has typically been observed prior to the outbreak of crises, and the intermediate exchange rate arrangement adopted by the crisis countries gave currency speculators a one-way bet.

Most economists would probably agree that there is no single currency system that is right for all countries or at all times. In the end, the choice of exchange rate regime is likely to be less important than the development of good fiscal, financial, and monetary institutions in producing macroeconomic stability, particularly in emerging economies.

(c) Monetary policy

In order to discuss the link between monetary policy and trade a distinction needs to be made between two scenarios – an economy with and without capital flows. We shall first assume the absence of capital flows and consider an economy with a current account deficit.

Financing current account imbalances in the absence of capital flows under a fixed exchange rate regime

In the absence of offsetting measures by monetary authorities, a current account deficit will lead to a monetary contraction and to pressures for interest rates to rise. The rise in interest rates will reduce spending by the private sector (firms and households), especially demand for interest-sensitive commodities such as capital goods (and hence investment) and consumer durables. Furthermore, since demand for financial assets increases as interest rates rise, central banks may be tempted to intervene. Expansionary monetary policy may or may not succeed in lowering interest rates, but it will accommodate the increase in production costs and a depreciation in the real exchange rate.

³¹ For more details, see Fischer (2001).

Note that a monetary policy will not be used to restore external equilibrium in countries which maintain foreign currency restrictions (i.e. with non-convertible currencies).³² External balance is maintained by restrictions imposed on the access and use of foreign currency. While ensuring that total foreign currency expenditures are kept at the level of current foreign currency earnings, however, the restrictions lead to distortions reflected in the presence of multiple exchange rates and distorted trade volumes and patterns. The distortions are unaffected by the conduct of monetary (and fiscal) policies which can only target domestic currency variables.

Monetary policy in the presence of capital flows and flexible exchange rates

In the presence of perfect capital mobility, the adjustment mechanism will be somewhat different. If a country is a small open economy and finds it desirable to maintain capital markets, monetary policymakers will have one degree of freedom less. They have to choose between fixed exchange rates with loss of monetary autonomy and floating exchange rates but with monetary sovereignty.³³ When authorities choose monetary sovereignty and floating rates, the effect of monetary policy on the current account balance is channelled through domestic interest rates. A current account imbalance is fully funded by capital inflows and a current account surplus is offset by capital outflows.³⁴

An expansionary monetary stance (a lowering of the short-term interest rate) will lead to lower demand for financial assets denominated in domestic currency, causing a depreciation of the exchange rate. With sluggish goods prices, this translates into a real depreciation and will make exports more competitive and imports more expensive.³⁵ Hence, more accommodating monetary policies will normally be associated with an improving current account balance. This will be mirrored in a corresponding deterioration in the capital account as investors shift their holdings away from domestic financial assets. Restrictive monetary policy will have the opposite effect on exports, imports and the current account balance.

Monetary policy in the presence of capital flows and a fixed exchange rate

Once again, a current account deficit is fully funded by capital inflows while a current account surplus is offset by corresponding capital outflows. However, in contrast to a regime with flexible exchange rates, monetary policy in the economy with a fixed exchange rate cannot be effective. Any attempt to change the money stock and interest rates will lead to offsetting movements of capital and hence to corresponding pressures for changes in the exchange rate. The central bank will have to intervene in order to maintain the exchange rate fixed at a given level. There is, therefore, no effect on trade.

Note that the room for monetary intervention is limited even if capital markets are imperfect. If, for example, investors do not immediately respond to interest rate differentials, the differences are likely to remain in place only for a limited period of time. In such a case, monetary independence will only be a short-term phenomenon.

Optimal monetary policy?

The challenge for monetary authorities in an open economy is to ensure that domestic instability does not translate into an external instability and imbalance. The issue of optimal policies in "normal" times, when governments need not respond to external crisis is subject to continuous debate. The academic discussion on optimal monetary policies has focused on the choice between rules and discretion. Rules, such as a fixed growth rate of money supply or inflation targeting, create greater predictability in monetary policy. Further, when monetary authorities follow well-specified rules and pre-commit not to create policy surprises, rules

³² See discussion in Section 3 above.

³³ This loss of a degree of freedom is sometimes referred to as the "impossible trinity" and refers to the proposition that only two of the following conditions can hold: i) capital is perfectly mobile; ii) exchange rates are fixed; and iii) monetary authorities have autonomy (in determining monetary aggregates and the domestic interest rate).

³⁴ For a contrarian's view, see Rose (1996) who tried to empirically test the validity of the proposition. He did not find any strong support for the mutual incompatibility of fixed exchange rates, monetary independence, and perfect capital mobility although he acknowledged difficulties in measuring monetary independence and capital mobility.

³⁵ This may be accompanied by exchange rate "overshooting", as already noted above.

allow for a lower rate of inflation in the long run.³⁶ However, the drawback is that the central bank will be unable to respond when unforeseen circumstances occur. Discretion gives the central bank leeway in determining policy, but it adds an important source of uncertainty to the economy.

Historically, central bank behaviour has been a mix of both. However, there has been growing sentiment for policy to be guided by fairly simple rules with the only question being what rule would be the best. Ironically, the popularity of rules has come together with the reduced role of targeting monetary aggregates. This is because the relationship between money and economic activity has become less predictable, i.e. velocity has become less predictable, probably as a result of distortions in the functioning of the banking system in the process of financial intermediation. Considerable attention has recently been given to the Taylor rule in which the short-term interest rate adjusts positively to increases in core inflation and to the deviation of output from the natural rate.³⁷ In the past few years, a number of central banks have adopted inflation targeting as an alternative to the Taylor rule.³⁸

(d) Fiscal policy

In general, prudent fiscal policies that aim at aligning government spending with tax revenues tend to lead to greater macroeconomic stability. This does not mean, however, that budgets have to be balanced every year, but imbalances must be sustainable and without adverse effects for the rest of the economy. Moreover, when fiscal revenues decline, other things being equal, government savings fall, increasing pressures for the current account deficit to widen.

There are a number of pathways through which fiscal imbalances can be transmitted to the trade account. One is directly through the increase in absorption and hence imports. The other is through the impact of government borrowing on interest rates and the real exchange rate. An increase in public spending will tend to increase domestic interest rates and set in motion an incipient appreciation of the domestic currency.³⁹ In the short run with goods prices being sluggish, this will represent a real appreciation of the domestic currency with some possible loss of competitiveness in export markets. Thus, an increasing fiscal deficit will normally be associated with a deterioration of the current account balance.

Conventional wisdom states that fiscal policy tends to be slow due to decision and implementation lags. In addition, central banks can react fast with relatively limited outside political pressure in countries in which their status is independent. In certain circumstances, however, fiscal policy can be more effective than monetary policy. For example, fiscal policy – unlike monetary policy – can be very effective in the presence of (perfect) capital mobility and fixed exchange rates. Fiscal expansion will lead to pressure for the interest rate to rise, to capital inflows and to exchange rate appreciation. The authorities will have to intervene by expanding the domestic money stock in order to maintain the exchange rate at the same level, moving the economy to a higher level of output and lowering interest rates. The expansion of output and incomes will result in an increased demand for imports and a deterioration in the current account balance, which will be financed by increased capital inflows.

³⁶ This is the solution to the time-inconsistency problem identified by Kydland and Prescott (1977).

³⁷ The Taylor rule usually takes the form: $i = r + \pi^* + \alpha(y - y^*) + \beta(\pi - \pi^*)$, where i , r , π^* , y , y^* and π are the short-term interest rate (target), the real interest rate, the target inflation rate, actual output, the natural rate of output and the actual inflation rate. α and β are parameters which should both be positive. The Taylor rule seems to describe the conduct of actual monetary policy in several countries, including the United States.

³⁸ The countries are, for example, Canada, New Zealand, the United Kingdom, Sweden and the Czech Republic. Bernanke and Mihov (1997) argue that the policy of the German Bundesbank could also be characterized as targeting inflation for most of the post-Bretton Woods period even though it officially targeted a monetary aggregate. A related and recently debated issue is whether inflation targets should include asset prices in the inflation target. See, for example, C. Bean (2003).

³⁹ The upward pressures on interest rates can be offset by increased demand of households and firms for government debt paper – a situation characteristic of Japan in recent years.

The conclusion that fiscal policy will be more effective under certain conditions holds true especially whenever a fiscal deficit and/or excessive growth of domestic credit are seen as the origins of a balance of payments crisis and the authorities do not wish to devalue. Primarily as a result of the Asian financial crisis, however, such a recommendation may be pursued more cautiously by policy makers if fiscal imbalances are no longer the origin of the problem.⁴⁰

When fiscal policy is used to restrain domestic demand, the design of fiscal measures will also be very important. As noted above, excessive dependence of government budgets on one single source of revenue – such as in the case of many developing countries and their dependence on tariff revenues – will greatly constrain the effectiveness of fiscal policy.⁴¹ While budget deficits may still have to be reduced, the inability of governments to diversify their tax base or to increase the efficiency of tax collection will act as a drag on domestic growth. Accordingly, a reduction of the fiscal deficit will tend to lower trade.

With a greater degree of freedom for fiscal manoeuvre, the authorities need to ensure that an increase in public savings is not offset by a reduction in private savings. Increased direct taxation will reduce disposable incomes and, most likely, household savings. Increased corporate taxation will generate adverse incentives for firms to expand output, corporate incomes, employment and the wage bill. Increased indirect taxation of intermediate inputs will increase production costs with adverse effects on production activities. The aim of the policies must be to increase aggregate savings if the objective is a reduction of the current account deficit.

(e) Financial liberalization

So far, we have only considered the way in which governments apply instruments of macroeconomic policy to target aggregate spending. However, the imbalances may originate in distortions that are of a structural nature and cannot be effectively removed by measures designed to target aggregate demand. Indeed, structural constraints and the need to address them with structural policies may even dominate the policy reform agenda in some situations. However, since structural policies are long-term measures and require time to take effect, and since balance of payments crises require an immediate solution, macroeconomic policies will still play a critical role but may have to be combined with appropriate structural policy measures.

Which structural policies have to be used will depend, of course, on the specific circumstances of each country. Currently, the most frequently debated measure of a structural nature is financial liberalization. Should countries liberalize their domestic financial markets or should they maintain restrictions on capital movement? In particular, would a liberalization of domestic financial markets be helpful in restoring external equilibrium?⁴²

Approaches to financial liberalization

The approach to financial liberalization varies from country to country. Most developing countries' financial sectors remain relatively closed. In contrast, developed countries' financial markets are open even though the opening of their markets is a fairly recent phenomenon. Furthermore, a large number of transition countries have aggressively pursued an opening of their financial sectors to foreign competition.⁴³

⁴⁰ See Mussa and Savastano (1999) for more details.

⁴¹ As noted in subsection 4(c) above, it is, of course, possible to replace any revenue lost as a result of tariff cuts. This replacement must come from effective reform of the indirect tax system, by adopting or improving a value added tax, by improved tax administration, or by a reduction in tariff peaks. Moreover, a reduction of tariffs could be more than offset by increased import volumes and, possibly, increased tariff revenues as well as reduced incentives to smuggle.

⁴² The benefits of financial liberalization are far greater than merely as an instrument of balance of payments management. The broader aspects are not discussed here. For a review of the literature see Prasad et al.(2003).

⁴³ The policy to liberalize capital accounts and financial markets in stress situations of current account imbalances has been highly controversial especially after the financial crisis in 1997 in South East Asia. This point is elaborated further in the text.

The objectives of financial liberalization and deregulation will vary according to the nature of distortions in financial markets. The distortions may affect foreign currency markets as well as domestic money and other financial markets dealing in domestic currency-denominated instruments. Foreign currency markets can be affected by restrictions on transactions denominated in foreign currencies, and these can range from restrictions on the use of export proceeds to restrictions on firms to borrow in foreign currencies abroad or restrictions imposed on foreign residents to acquire domestic assets.

The objectives of reforms aiming at the deregulation of domestic financial markets will also vary according to local conditions. Typically, the distortions have included: i) restrictions on the flexibility of banks to price their loans according to the market risk (leading to deregulation of interest rates); ii) restrictions on the allocation of credit (leading to elimination of “directed credits”); iii) barriers preventing financial institutions from expanding the range of their financial instruments in order to widen the consumer choice, and to protect banks against credit and non-credit risks; and iv) barriers preventing financial institutions from enhancing corporate governance and increasing the efficiency of their operations through market consolidations and mergers.

Financial liberalization and trade policy

The reasons for these different approaches to financial liberalization are principally related to concerns of countries about the likely effects of free capital movements on the stability of their exchange rates, financial sector, inflation, and trade. Will the opening of the capital account increase domestic financial instability and output volatility rather than help finance current account deficits? Will improved access of foreign capital to domestic markets enhance the economic potential of the host country and thus facilitate balance of payments management? In brief, these concerns are about surges of foreign capital which can be generated by the removal of restrictions on capital movements and capital flight which has often followed the surges in the aftermath of financial crises.

Surges of capital flows lead to excessive expansion of monetary liquidity. The increase has to be “mopped up” to prevent inflationary pressures, but this can only be done at very high costs as interest rates rise, attracting more capital inflow which will further reduce the effectiveness of monetary policy. But a flexible exchange rate is not a panacea either. If the exchange rate is flexible, the domestic currency appreciates and this will lead to an increase in the current account deficit. Moreover, rising interest rates increase debt service payments and the proportion of non-discretionary expenditures of the government and in the corporate sector. The flexibility of fiscal policy is further reduced and the banks’ balance sheets deteriorate as the proportion of non-performing loans increases.

Has financial liberalization been beneficial?

The evidence on the role of financial liberalization on macroeconomic volatility is inconclusive. An earlier study of Razin and Rose (1994) found no significant link between financial openness and volatility of output, consumption and investment. Writing in the same spirit, Easterly, Islam, and Stiglitz (2000) and O’Donnell (2001) find that a higher level of development of the domestic financial sector and a high degree of financial integration are associated with lower volatility. In other words, the depth of financial integration matters – the deeper the integration is, the better the financial sector can deal with capital surges and outflows.

The most comprehensive review to date of the relationship between financial liberalization and macroeconomic performance has been the recent study of Prasad, Rogoff, Wei and Kose (2003). What makes the study particularly interesting is that the authors look at the topic from the perspective of developing countries whose financial sectors could in theory greatly benefit from the removal of foreign currency restrictions on foreign capital, and restrictions on access to their financial markets. The authors have put together the evidence from the literature as well as their own. It may be useful to summarize their conclusions: “The principal conclusions that emerge from the analysis are sobering but, in many ways, informative from a policy perspective. It is true that many developing countries with a high degree of financial integration have also experienced higher growth rates. It is also true that, in theory, there are many channels through which financial openness could enhance growth. A systematic examination of the evidence, however, suggests that it is difficult to establish a

robust causal relationship between the degree of financial integration and output growth performance. There is also little evidence that financial integration has helped developing countries to better stabilize fluctuations in consumption growth.”⁴⁴

Nevertheless, a few general principles have emerged from their study. The quality of domestic institutions and macroeconomic stability, enhanced by strong macroeconomic policies, are critical in attracting FDI. Moreover, since FDI is typically less volatile than portfolio investment, inflows of FDI further enhance macroeconomic stability. Recent studies such as Lehman (2002) and Brada and Tomsik (2003) show that FDI contributes positively to the balance of payments and that the contribution can be very large.

The finding that the supply of foreign capital is dependent, *inter alia*, on macroeconomic stability is supported by other empirical evidence. Some of that evidence is summarized in Table IIA.1, Panel C. The studies reported in that panel refer to two different sources of foreign capital – FDI and foreign assistance flows – and they confirm the importance of the influence of macroeconomic conditions on the supply of FDI and foreign aid.⁴⁵ Macroeconomic conditions are, of course, only one factor among different determinants of movements of foreign capital. Their roles are crucial, however, as all these studies clearly demonstrate.

Sequencing issues

Sequencing of economic reform is always controversial and the question of sequencing of financial liberalization is equally difficult. Nevertheless, several fairly widely acceptable conclusions have emerged from the literature and practical experience.

Perhaps the most widely discussed sequencing issue has been the relationship between trade liberalization and macroeconomic stability. As observed in many empirical studies, a period of macroeconomic instability (i.e. inflation) is very unlikely to be the right time to liberalize trade regimes. Domestic inflation, unsustainable levels of foreign and domestic debt, exchange rate volatility or poor conduct of macroeconomic policies will all lead to a loss of investors’ and consumers’ confidence. This, in turn, will endanger trade liberalization since its success will critically depend on the availability of investment funds. Any non-uniform change in tariffs (or quotas) will lead to changes in relative product prices and hence the relative attractiveness of different sectors of the economy. The changes in sectoral incentives will stimulate movements of resources from less to more profitable industries but the movement will not take place if the investors’ confidence is lost. Moreover, even uniform changes in tariffs will most likely have to be accompanied by increased investment activity as greater competition will push firms to seek new ways of remaining competitive – for instance, through the acquisition of new technologies.

However, trade liberalization measures have often been taken even in the presence of macroeconomic instability. The decision to liberalize in such cases was based on the belief that increased competition would induce firms to take internal measures to increase efficiency without new investment. Thus, the implicit assumption is that firms operate below their optimal production capacity. In reality, this is indeed often the case, particularly in times of macroeconomic instability. In brief, the sequence in which trade policy measures are taken in relation to the process of macroeconomic stabilization critically depends on judgments about the likely impact of these decisions on investment and the likely response of firms to foreign competition.

In addition, there are several other sequencing issues to be considered. First, liberalization of financial markets is most likely strongly related to the liberalization of other markets. According to Aizenman (2003), countries with more open trade regimes also have more open financial sectors. The high correlation can be explained in different ways. The most sensible explanation seems to be that countries that are heavily integrated in global markets for goods will also require deeper integration of financial services.

⁴⁴ See Prasad et al. (2003), p.1. Volatility of consumption is treated by the authors as a better measure of macroeconomic stability.

⁴⁵ While the importance of macroeconomic stability on supply of foreign aid seems to be quite accepted in the literature, the link between effectiveness of aid and economic growth is much more controversial. The latter, however, is not a subject of this paper. For more detail on the debate see, for example, Easterly (1999).

Second, countries have typically liberalized their current accounts before opening their capital accounts. In other words, these countries have first removed the restrictions on foreign currency transactions involving the current account of the balance of payments before removing restrictions on capital movements.

Third, the reverse sequence – the liberalization first of the capital account – is very uncommon. Countries with highly protected goods and services markets pose extra risks for investors. Protected industries increase investors' uncertainty about the likely success with which the protected industries will become internationally competitive. Moreover, governments often protect those sectors in which the country in question does not currently have comparative advantage, thus further reducing the prospects for future profitability.

(f) A policy implication: shocks to the balance of payments, optimal policies and WTO rules

A number of provisions in the GATT 1994 allow for quantitative restrictions in cases where a country runs into balance of payments disequilibrium. Article XII of GATT 1994 allows a WTO Member to restrict the quantity of imports in order to safeguard its balance of payments. There is also a separate provision on restrictions for balance of payments purposes applying to developing countries. Article XVIII:B of GATT 1994 permits a developing country to restrict the quantity or value of imports "in order to safeguard its external financial position and to ensure a level of reserves adequate for the implementation of its programmes of economic development". This recognizes the structural nature of the balance of payments problems of many developing countries, which have experienced more fiscal instability than developed countries. A major factor for this provision has been the mismatch between the expenditures of the central government and its ability to generate revenues from taxes. The requirement to build infrastructure and provide for social security often comes into conflict with the difficulty of collecting taxes in economies where the informal sector is large, many enterprises are small and tax evasion is rampant.

However, there is an increased recognition among WTO Members that quantitative restrictions are an inefficient means to respond to balance of payments disequilibrium. Thus, the Uruguay Round Understanding on Balance-of-Payments Provisions of GATT 1994 encourages all WTO Members, including developing countries, to give preference to "price-based measures" such as import surcharges or other equivalent trade measures with an impact on the price of imported goods.

7. CONCLUDING REMARKS

The main purpose of this Section has been to clarify the linkages between trade and trade policy on the one hand and macroeconomic performance and policies on the other. Various policies which can be used to target external imbalances have been discussed and their impact on trade has been examined.

The discussion of these linkages focused on one specific issue – targeting an external imbalance and choosing among different policy instruments. In reality, however, governments rarely, if ever, subordinate their macroeconomic policies to the dictates of the management of the current account. They have other objectives such as the task of controlling domestic inflation or managing the rate of domestic unemployment. This means that governments only rarely maintain a fully neutral stand in the presence of an unsustainable balance of payments deficit. In brief, they will seek to restore the external balance while maintaining or restoring the internal balance as well.

In restoring macroeconomic equilibrium, open trade policies play an important role. Open trade regimes help strengthen the country's growth prospects, which is a critical factor for maintaining a healthy balance of payments. By promoting trade, the policies promote the country's integration into global markets and its ability to reap benefits from economies of scale and from more efficient participation in global patterns of specialization. Furthermore, open trade regimes increase transparency of government policies and institutions.

This study concludes that the use of trade restrictions as an instrument for restoring external equilibrium is highly undesirable. The effects of trade restrictions are asymmetric and welfare-reducing. In addition, trade restrictions may only improve the balance of payments in the short run. A second main message is that open trade policies are not sufficient to benefit from greater integration into world markets. Open trade policies will fail if they are not accompanied by sensible macroeconomic policies. This translates into policies that support macroeconomic stability. Countries with open trade regimes tend to grow faster if they are also financially more stable. Moreover, what holds for macroeconomic policies will also hold for other policies. If economic performance is adversely affected by other distortions, other appropriate policies targeting those distortions will have to be part of the package.