

10

Export Performance and Competitiveness in Mozambique

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Mozambique has experienced impressive economic growth over the past decade. GDP growth has averaged about 8 percent a year, which compares favorably with the growth takeoffs of Indonesia, Malaysia, the Philippines, and Thailand (the four members of the Association of Southeast Asian Nations referred to in this book as the ASEAN-4) and other Asian countries in the mid-1970s (see Chapter 1).

The literature seeking to explain the rapid economic growth of several Asian countries since the 1970s has emphasized the important role played by their export sectors. This is especially true of the ASEAN-4 countries. The contribution of these countries' export sectors to economic growth has increased dramatically in the three and a half decades since their growth takeoffs, as evidenced by the spectacular rise in the ratio of exports to GDP during this period. In addition, as Bigsten and Söderbom (2006) note, there is some evidence that firms become more productive when they export. Thus, an upturn in exports could lay the foundation for sustained growth. (See Table 10.1.)

Mozambique has experienced a similar improvement in its export performance since 2001. Although impressive, this rise is due almost exclusively to exports produced by the megaprojects exploiting the country's vast mineral resources, most notably aluminum. Excluding megaproject exports, the contribution of the export sector to the Mozambican economy has remained relatively stable.

Table 10.1. Selected Indicators for Mozambique and Other Countries

	Average real GDP growth (<i>In percent</i>)				Average export growth (<i>In percent</i>)				Average export-to-GDP ratio (<i>In percent</i>)			
	1971 -80	1981 -90	1991 -2000	2001 -06	1971 -80	1981 -90	1991 -2000	2001 -06	1971 -80	1981 -90	1991 -2000	2001 -06
Mozambique	3.9	0.5	5.4	8.8	-3.1	-0.7	15.0	7.0	9.5	7.2	15.3	31.1
ASEAN-4	7.1	5.1	4.4	4.8	12.9	6.8	11.3	4.2	22.3	28.2	47.7	60.8
Vietnam	3.9	5.9	7.6	7.6	-4.5	16.4	25.2	5.2	2.5	7.6	39.7	63.1
India	3.0	5.8	5.6	7.0	6.3	6.0	11.2	14.0	5.3	6.2	10.5	17.1
Tanzania	3.8	3.3	2.9	6.4	7.2	16.5	4.8	18.5	16.7	12.1	18.4	18.9
Sub-Saharan Africa	3.3	2.2	2.2	5.0	n.a.	2.8	5.8	4.7	25.8	24.6	27.6	34.8

Source: IMF, World Economic Outlook database.

The increasing number of megaprojects has had a clear positive effect on the economy—for example, by putting Mozambique on the map for foreign direct investment (FDI) and through knowledge spillovers. However, their importance should not be overstated. Megaprojects are typically neutral in terms of a country's balance of payments, contribute little to overall employment, and have not—at least until recently—had a significant impact on fiscal revenues.¹ As a result, it is clear that for Mozambique's impressive growth to translate into employment generation and a reduction in poverty, the source of export growth must be diversified. This requires understanding the causes underlying the comparatively lackluster performance of Mozambique's traditional export sector, which is the aim of this chapter.

Based on our analysis, efforts to enhance the performance of Mozambique's export sector should focus on (1) maintaining a flexible exchange rate system; (2) implementing structural reforms, notably through improvements in the business environment aimed at improving competitiveness and diversifying the export base, as discussed in Chapter 9; and (3) supporting broad-based multilateral trade liberalization initiatives.

The remainder of this chapter is organized as follows: the next section documents the performance of the export sector in Mozambique and compares it with that of other countries that have experienced a growth takeoff similar to Mozambique's. Then we discuss possible reasons underlying the relatively lackluster performance of Mozambique's traditional export sector, including the competitiveness of the Mozambican economy—as measured by the real effective exchange rate (REER)—and

¹See Chapter 8 for a comprehensive survey of megaprojects in Mozambique.

the demand for Mozambique's exports in the world market. This is followed by a section in which we estimate Mozambique's equilibrium real effective exchange rate (EREER) in an effort to determine whether corrective macroeconomic policies to remove disequilibria in the economy are required to improve the country's competitiveness or whether this can best be achieved through structural reforms aimed at influencing the underlying EREER. After discussing the effect of limiting exchange rate flexibility, we briefly discuss structural policies aimed at improving the business climate in Mozambique as well as Mozambique's trade policy environment, both of which are key determinants of economic competitiveness and the underlying EREER. The chapter concludes with a summary of the main findings and policy recommendations.

Background

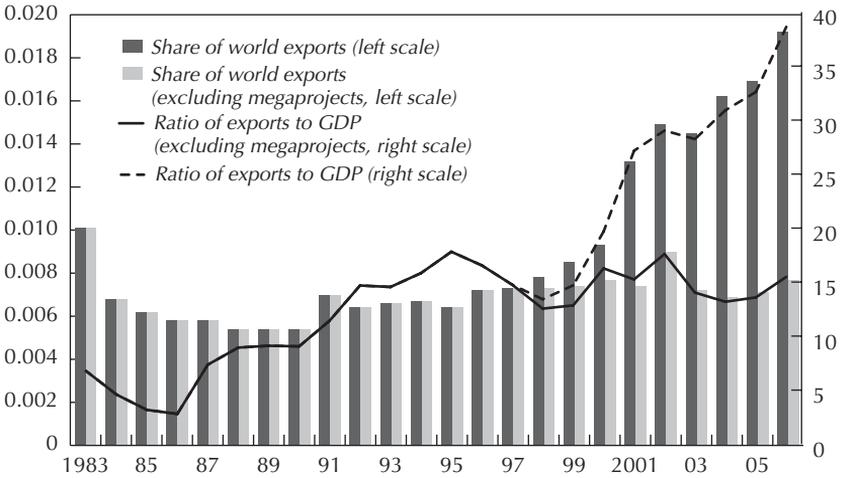
The ratio of exports to GDP in Mozambique rose from approximately 15 percent in 1999 to more than 35 percent in 2006, while Mozambique's share of world exports rose from approximately 0.009 percent to about 0.019 percent during the same period (Figure 10.1). However, as mentioned in the introduction, this rise is due almost exclusively to megaproject-related exports; other exports have remained more or less flat since 1991 as a share of both GDP and world trade.

The importance of megaproject exports for the recent increase in Mozambique's share of world exports can also be seen in Table 10.2, which shows that, with the exception of aluminum, the market share of Mozambique's main exports has remained relatively stable.

Confirming these findings, Figure 10.2 shows that although the contribution of megaproject exports to overall GDP growth has been increasing, the contribution of non-megaproject exports has remained relatively stable since 1994. Since 1994, real annual GDP growth in Mozambique has averaged 7.8 percent, with investment accounting for 3.8 percent and consumption for 2.8 percent. Since 1999, when megaprojects started to make a contribution to GDP growth, the main drivers of economic growth have been investment (4.3 percent), followed closely by megaproject exports (3.2 percent). Since the first megaprojects were launched in 1999, non-megaproject exports have contributed only 0.8 percent, on average, to real GDP growth.

Figure 10.3 shows that movements in the price of Mozambique's exports have been an important component of the recent increase in Mozambique's share of world exports. The price of Mozambique's exports remained relatively stable until 2002 but has since then increased dramatically in line

Figure 10.1. Exports of Goods and Services, 1983–2006
(In percent)



Sources: IMF, World Economic Outlook database; and IMF staff estimates.

with the increase in the world price of aluminum.² This implies that the increase in Mozambique's share of world exports from 1999 to 2002—when the export deflator was relatively stable—was due to an increase in the volume of Mozambique's exports. Since then, however, Mozambique's share of world exports in volume terms has actually decreased by more than 50 percent, although this has been more than offset by an increase in the export deflator of 260 percent. These developments illustrate the sensitivity of Mozambique's exports—in particular megaproject exports such as aluminum—to changes in commodity prices.

Another potential source of concern is the declining importance of non-megaproject manufacturing exports in Mozambique. Although a variety of export patterns can lead to income growth, as noted in IMF (2007), manufacturing exports are often considered to have been the drivers of export-led growth in the Southeast Asian countries during the past three decades.³ In Mozambique, the share of non-megaproject manufacturing exports in total exports declined from 6.3 percent in 1995 to approxi-

²The world price of aluminum at the end of 2006 was more than double its level at the end of 2002.

³See, for example, Johnson, Ostry, and Subramanian (2007).

Table 10.2. Mozambique: Market Share of World Exports*(In percent)*

	1995	2000	2001	2002	2003	2004	2005
Aluminum	0.1	0.0	0.8	0.7	1.0	1.2	1.3
Electric current	n.a.	0.6	0.4	0.9	0.7	0.5	0.6
Natural gas	n.a.	n.a.	n.a.	n.a.	0.0	0.0	0.1
Crustaceans, mollusks, etc.	0.6	0.5	0.6	0.7	0.4	0.6	0.5
Tobacco, raw and waste	0.2	0.0	0.1	0.4	0.4	0.6	0.6
Heavy petrol/bitum oils	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sugar/molasses/honey	0.0	0.1	0.1	0.1	0.1	0.2	0.0
Fruit/nuts, fresh/dried	0.1	0.1	0.1	0.1	0.0	0.1	0.1
Cotton	0.3	0.3	0.1	0.3	0.4	0.3	0.4

Source: United Nations Comtrade database.

mately 1.5 percent in 2005. Taken together, these trends pose a series of challenges and opportunities for increasing the contribution of the export sector to the Mozambican economy.

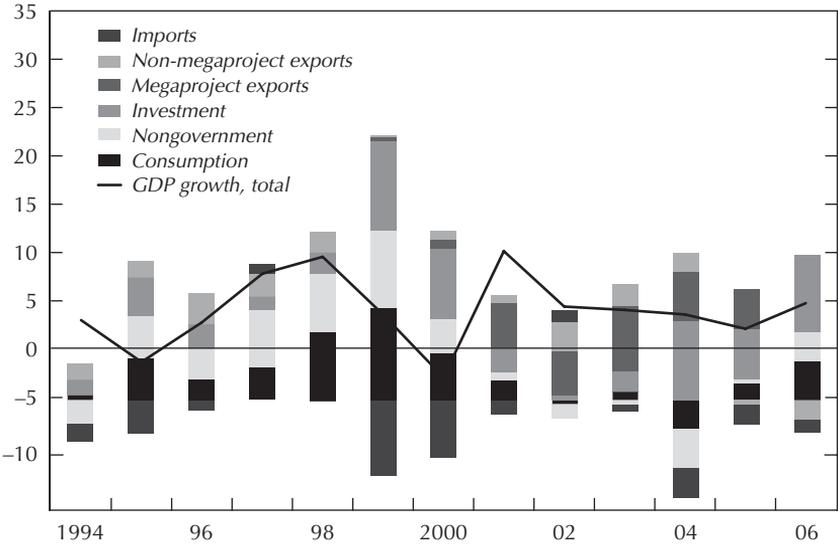
Explaining the Performance of Mozambique's Traditional Export Sector

The lack of dynamism in Mozambique's non-megaproject export sector could be attributable to Mozambique's lack of competitiveness or to developments in Mozambique's export markets. A deterioration in competitiveness represents an increase in the price of domestic tradable goods relative to foreign tradable goods.⁴ However, because this is not directly observable we rely on movements in the REER to draw inferences about competitiveness. The analysis of Mozambique's export markets is based on a comparison between the growth of export volumes and prices for the products that Mozambique exports, and total exports.

The REER warrants careful monitoring because of the inflow of large amounts of aid to Mozambique, as well as the growth of revenues from megaprojects. It is now accepted that large capital inflows—arising, for example, from a scaling up of aid—can lead to real exchange rate appreciation (a deterioration in competitiveness) and Dutch disease,⁵ in much the same way that Dutch disease can result from an increase in natural

⁴See Agénor (2004). Note that the real exchange rate as defined here does not correspond to the relative price of tradable and nontradable goods inside the country (sometimes called the internal real exchange rate).

⁵See Chapter 8 for a discussion of Dutch disease.

Figure 10.2. Contributions to Economic Growth, 1994–2005*(3-year moving average, in percent)*

Source: IMF staff estimates.

resource prices or the discovery of new natural resources.⁶ This argument, which is based on what Corden and Neary (1982) call the “spending effect” of Dutch disease, assumes that aid is spent, in part, on nontradables, implying an increase in their prices. While the demand for tradables may also increase—for example, if part of the aid is spent on imported goods—this does not affect the prices of tradable goods to the extent that these prices are determined in international markets. The result is an increase in the prices of nontradables relative to tradables, implying real exchange rate appreciation. As a result, the export sector—in particular, the traditional export sector—may suffer.

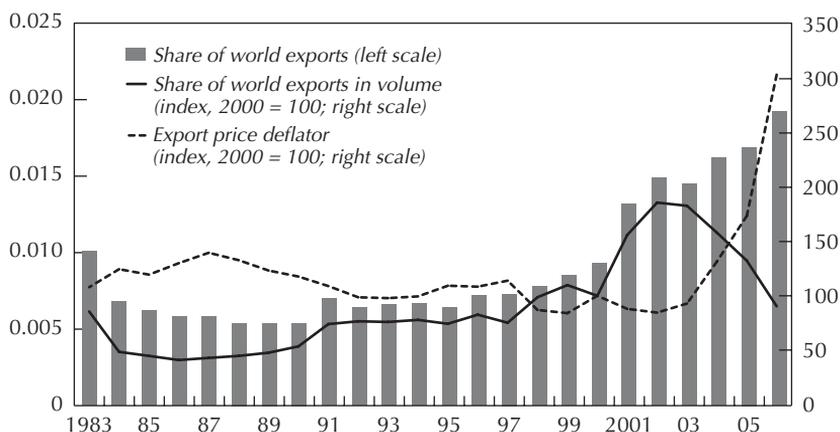
Exchange Rate Developments⁷

As Figure 10.4 shows, the Mozambican REER has remained relatively stable over the past 10 years, which suggests that there has not been a

⁶See, for example, Younger (1992); Bulíř and Lane (2002); Adam and Bevan (2003); Nkusu (2004); and Rajan and Subramanian (2005).

⁷This section draws heavily on material in Oomes (2006).

Figure 10.3. Mozambique's Share of World Exports, 1983–2006
(In percent)



Sources: IMF, World Economic Outlook database; and IMF staff estimates.

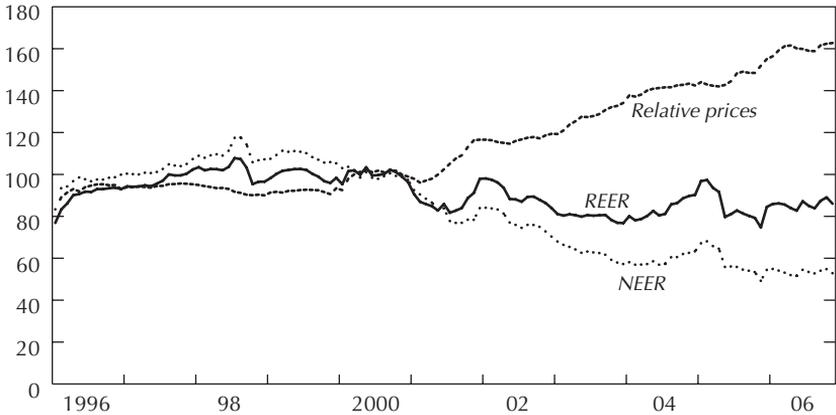
substantial change in competitiveness.⁸ While the nominal exchange rate has depreciated gradually since 2001, this has been offset by an increase in relative prices. Broadly speaking, the REER appreciated between 1994 and 1998, was roughly stable during 1998–2000, depreciated during 2001, and was roughly stable again during 2002–03. The past three years have been characterized by high volatility, with a significant real and nominal appreciation in late 2004 that was largely undone in early 2005, largely because of the introduction of a foreign exchange auction system in January 2005.

The period 1990–2006 can be divided into six subperiods with distinct de facto exchange rate regimes. These six periods are summarized in Table 10.3 and are indicated in Figure 10.5, on the basis of the de facto regime classification constructed by the IMF for all of its member countries. The de facto exchange rate regime is the regime that appears to have been actually followed, based on a close analysis of the data, and may be different from the de jure exchange rate regime announced by the authorities.⁹

The exchange rate regime in the first period, which began just prior to January 1990 and lasted until March 1992, is best characterized as a

⁸Figure 10.4 shows the consumer price index–based REER for Maputo.

⁹In comments on an earlier draft of this chapter, the Bank of Mozambique expressed some misgivings about this classification. These misgivings are reflected in the discussion of each time period.

Figure 10.4. Exchange Rate Developments, 1996–2006*(In percent)*

Source: IMF staff estimates.

Note: REER = real effective exchange rate. NEER = nominal effective exchange rate.

backward-looking crawling peg. Under this regime, the metical gradually depreciated vis-à-vis a basket of 18 major currencies, with the weights of these currencies determined by the relative importance of each trading partner in Mozambique's overall trade. In October 1990, a more depreciated market-determined secondary market was initiated, and the objective of exchange rate policy was to gradually reduce the gap with the secondary market rate.

The regime in the second period, which lasted from April 1992 to May 1993, can be described as a managed floating exchange rate, with no preannounced exchange rate path. In April 1992, most transactions were transferred to the secondary market, which was still heavily controlled and different from the parallel market rate.¹⁰ The nominal effective exchange rate continued depreciating until August 1992 but began to appreciate in the fall of 1992, possibly because of the resumption of aid following the end of the Mozambican civil war with the signing of the cease-fire agreement between Frelimo and Renamo on October 15, 1992.¹¹

¹⁰The de facto exchange rate regime classification is based on the secondary market exchange rate from this period on.

¹¹According to the World Bank's World Development Indicators, aid nearly doubled as a percentage of gross national income in 1992, while aid per capita in current U.S. dollars rose by one-third between 1991 and 1992.

Table 10.3. Mozambique: De Facto Exchange Rate Regimes, 1990–2006

Regime	Period	Classification
I	Jan. 1990–Mar. 1992	Backward-looking crawling peg
II	Apr. 1992–May 1993	Managed floating with no predetermined path
III	Jun. 1993–Dec. 2001	Independently floating
IV	Jan. 2002–Sep. 2002	Managed floating with no predetermined path
V	Oct. 2002–Apr. 2004	Forward-looking crawling peg
VI	May 2004–Present	Managed floating with no predetermined path

Source: IMF staff estimates.

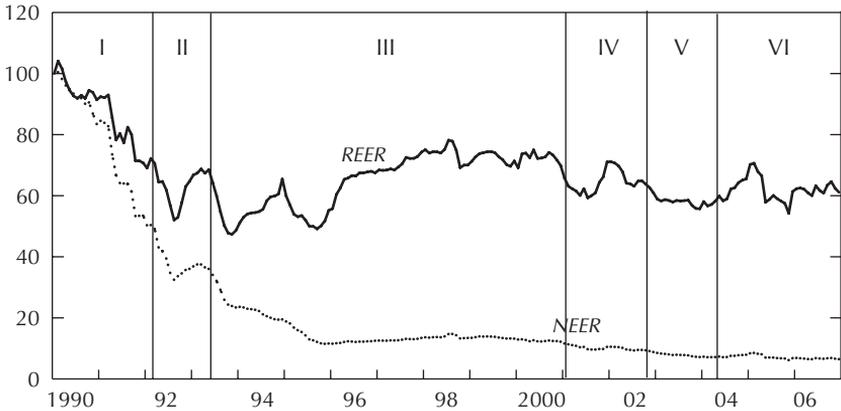
The IMF classification suggests that the regime in the third period—which was a long one, from June 1993 through December 2001—was a de facto independent floating exchange rate, although, as the Bank of Mozambique points out, several significant changes to the institutional setup of the exchange rate market were made during this time.¹² The exchange rate system was unified in June 1993, and the exchange rate became market-determined. While interventions continued, it appears that these were aimed largely at achieving reserves targets, not at influencing the exchange rate. Although the exchange rate was surprisingly stable from November 1995 on, there is no evidence of a de facto pegged regime, given that the spread with the parallel market rate continued to narrow.¹³

During January 2002–April 2004 (the fourth and fifth periods), the exchange rate was more strongly managed. From January to September 2002 (the fourth period), the de facto regime was again best described as a managed floating exchange rate, while from October 2002 to April 2004 (the fifth period) there appeared to be a clear forward-looking crawling peg against the U.S. dollar. From an operational point of view, however, the Bank of Mozambique suggests that these two periods were similar insofar as no significant changes were made to the exchange rate regime.

From May 2004 onward, the exchange rate became more flexible but was still tightly managed. While the de jure regime during this period was a nominally floating exchange rate, the de facto regime was a tightly managed exchange rate subject to various exchange controls. The Bank of Mozambique continued to be a major player in the foreign exchange market and initially would set the price at which the sales and purchases of foreign currency were to be transacted.

¹²This includes the creation of an exchange rate interbank market (MCI) in 1996.

¹³Other countries that had a de facto fixed exchange rate or an exchange rate anchor typically had a much more depreciated parallel market rate.

Figure 10.5. De Facto Exchange Rate Regimes, 1996–2006*(In percent)*

Source: IMF staff estimates.

Note: REER = real effective exchange rate. NEER = nominal effective exchange rate.

Although it is not classified as a new regime, major changes were introduced in January 2005 when the Bank of Mozambique moved to a more flexible exchange rate regime with the introduction of foreign exchange auctions. Following the introduction of this auction mechanism, Mozambique experienced bouts of rapid exchange rate depreciation, which appear to have stemmed partly from a correction of a somewhat overvalued exchange rate at end-2004, lumpy oil import transactions, and portfolio shifts in the shallow foreign exchange market. In response to the volatility, the Bank of Mozambique introduced a temporary band in both the foreign exchange auctions and the interbank market (MCI) in November 2005, limiting variation both in the weekly auction rates and in day-to-day increases in the exchange rates. The new guidelines restricting demand and price movements, combined with much larger auction sales, halted the depreciation of the currency and the exchange rate has remained relatively stable since. The deepening of the MCI was also supported by a code of conduct for banks and measures to facilitate firm quotation. The band restricting the day-to-day increases in the exchange rate was loosened from 0.25 percent to 1 percent in December 2006 and abolished in June 2007. The authorities reiterated their commitment to a flexible exchange rate regime, which will help improve competitiveness.

Demand for Mozambique's Exports

The analysis in the previous section does not provide clear evidence of a decline in competitiveness. However, the performance of Mozambique's export sector also depends on the demand for the products that Mozambique exports to world markets. Mozambique is particularly vulnerable to changes in demand, given its high level of export concentration. As shown in Table 10.4, megaproject exports (aluminum, electric current, and natural gas) accounted for more than 70 percent of total exports in 2005. In 1995, these commodities accounted for 0.2 percent of total exports. Thus, while it is clear that megaprojects have raised the contribution of the export sector to economic growth in Mozambique, they have also contributed to an increase in export concentration.

With the notable exception of aluminum, natural gas, fruits and nuts, and sugar and molasses, the average growth in exports (in U.S. dollars) of the products that Mozambique exports was below the overall average growth of total world exports during 2000–05 (Figure 10.6).¹⁴ For some products, notably crustaceans and mollusks, tobacco, and cotton, this has been accompanied by relatively low average price increases. These two factors suggest a decline in world demand rather than in world supply for these products. For other products, notably fruits and nuts, the analysis suggests an expansion of world supply.¹⁵

The above analysis suggests that whereas world demand for megaproject exports has typically been increasing (in the case of aluminum, this would have been even clearer if 2006 were included, given the dramatic rise in world aluminum prices), it has been declining for traditional exports. Given that the previous section showed that Mozambique's competitiveness has remained relatively stable, the declining world demand faced by many of Mozambique's traditional exports may help explain why the contribution of the traditional export sector to growth in Mozambique has been relatively stagnant instead of increasing in line with megaproject

¹⁴Figure 10.6 shows that most of Mozambique's export products are positioned to the right of the vertical line that represents the average growth in world exports (8.6 percent) during 1995–2005. Some of Mozambique's exports are positioned below the horizontal line that represents the average rate of increases in the prices of world exports (1.7 percent). The combination of relatively low growth in export volumes and in prices implies that demand for these products has been expanding less rapidly than demand for world exports. The size of the bubbles represents the importance of each export commodity in total exports.

¹⁵Exports of electric current are not included in this analysis as these are governed by fixed price contracts with South Africa.

Table 10.4. Composition of Exports*(In percent of total exports)*

	1995	2000	2001	2002	2003	2004	2005
Aluminum	0.2	16.5	54.5	44.6	54.4	60.9	57.3
Electric current	n.a.	18.4	8.2	13.3	10.9	6.8	8.0
Natural gas	n.a.	n.a.	n.a.	n.a.	0.0	2.2	6.2
Crustaceans, mollusks, etc.	45.6	26.4	13.4	14.5	7.6	6.4	4.5
Tobacco, raw and waste	0.6	2.1	1.3	3.0	2.1	2.7	2.4
Heavy petrol/bitum oils	1.8	2.4	1.2	3.5	2.1	3.2	0.8
Sugar/molasses/honey	4.2	1.2	1.1	2.2	1.6	2.2	0.4
Fruit/nuts, fresh/dried	8.0	5.8	2.0	2.2	1.0	2.0	1.4
Cotton	10.8	7.1	0.9	2.0	3.6	1.9	2.0

Source: United Nations Comtrade database.

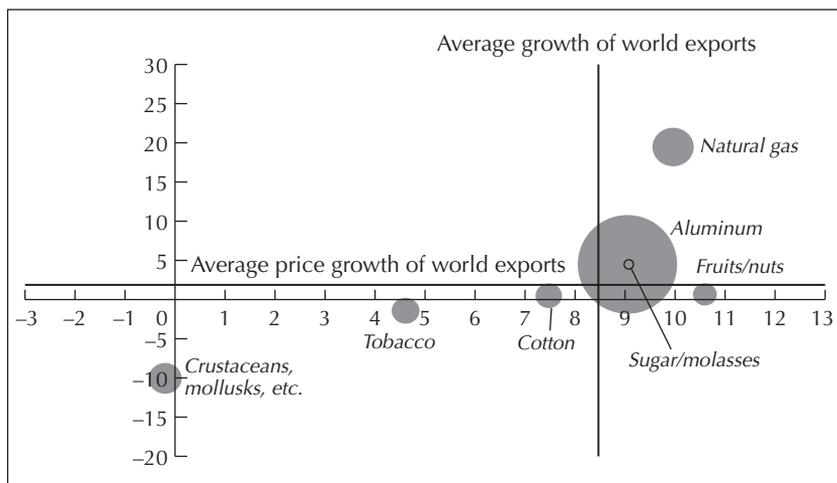
exports. It also suggests that diversifying Mozambique's export base should be part of a strategy to raise the contribution of the traditional export sector and to move toward products that are more dynamic in the marketplace, such as manufacturing exports.

The Equilibrium Real Exchange Rate and Exchange Rate Overvaluation

The previous section argued that the REER in Mozambique has remained relatively stable, suggesting that the level of competitiveness is relatively unchanged. The analysis suggests that declining world demand for many of Mozambique's exports, rather than a deterioration in competitiveness, might have contributed to the disappointing performance of the traditional export sector. The analysis thus far has not made clear, however, whether the current level of the REER is appropriate or an equilibrium (in a sense that will be made clear below) for Mozambique. To the extent that the current level of the REER is higher than the underlying equilibrium level, Mozambique's export sector may be not performing as well as it might have, had the REER been closer to its equilibrium.

Moreover, the appropriate policies to improve competitiveness depend on whether or not the REER is aligned with the underlying equilibrium rate or not. Sustained departures of the REER from equilibrium imply the existence of macroeconomic imbalances that need to be corrected through macroeconomic adjustment. On the other hand, if the REER is in line with the EREER, structural reforms aimed at improving the competitiveness of the export sector may be a more appropriate strategy for increasing the contribution of the export sector to the Mozambican economy.

Figure 10.6. Export Performance by Product, 2000–05
(In percent)



Source: IMF staff estimates.

There are a number of methodologies that have been used to estimate the EREER, each with its own strengths and weaknesses. To increase the robustness of our findings, we estimate the EREER for Mozambique using two different methodologies: first, using the relative purchasing-power-parity (PPP) approach modified to take into account the Balassa-Samuelson effect; second, using the fundamental equilibrium exchange rate (FEER) framework.¹⁶

Relative PPP Approach

The first approach for estimating the EREER defines the equilibrium exchange rate as the one that is consistent with relative PPP, modified to take into account the Balassa-Samuelson effect. Mozambique's *absolute* PPP exchange rate is defined as the nominal exchange rate consistent with the law of one price and implies that the real exchange rate is equal to one. *Relative* PPP is said to hold when the rate of depreciation of a bilateral

¹⁶Other concepts of the EREER include the traditional uncovered interest parity (UIP) and more recent approaches such as the underlying internal-external balance (UIEB) and the behavioral equilibrium exchange rate (BEER) approach.

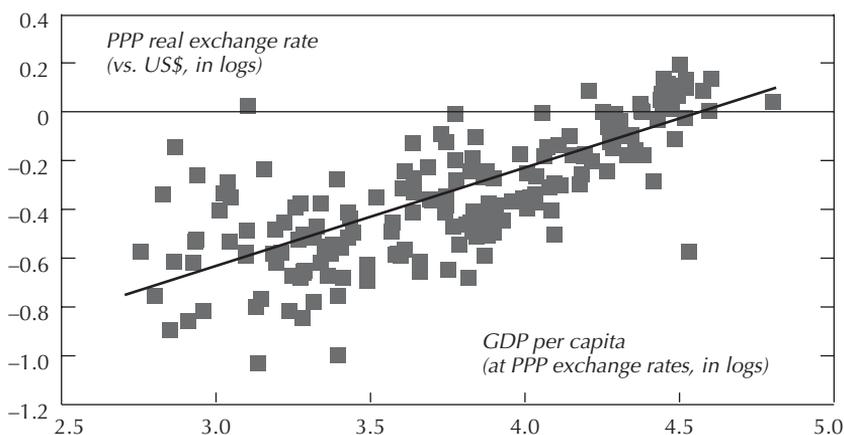
nominal exchange rate matches the inflation differential between the two countries. When relative PPP holds, the real exchange rate is constant so that movements in the real exchange rate can be interpreted as deviations from relative PPP, or exchange rate disequilibria. Although few economists would argue that PPP holds continuously, “most instinctively believe in some variant of purchasing power parity as an anchor for long-run real exchange rates” (Rogoff, 1996). Indeed, as Sarno and Taylor (2003) point out, many of the key results in international macroeconomics rely on some form of PPP holding as a long-run relationship.

Despite the theoretical attractiveness of relative PPP, the empirical evidence remains inconclusive, although some recent evidence suggests that “PPP might be viewed as a valid long-run international parity condition when applied to bilateral exchange rates obtaining among major industrialized countries. . . .” (Sarno and Taylor, 2003). Its usefulness for developing and emerging countries appears limited, however.

Within the context of developing and emerging market countries, a particular challenge is to rationalize the existence of long-run deviations from PPP. A promising approach in this regard is the Harrod-Balassa-Samuelson model, which modifies relative PPP to take into account productivity differentials between the tradables and the nontradables sectors (the Balassa-Samuelson effect). The Balassa-Samuelson effect is based on the argument that in fast-growing economies such as Mozambique, productivity growth will be concentrated in the tradables sector. This will lead to wage increases in the tradables sector but, because tradable prices are determined in the world market, not to comparable increases in prices. However, higher wages in the tradables sector will put upward pressure on wages in the nontradables sector, which, in turn, will put upward pressure on the prices of nontradables, resulting in the appreciation of the real exchange rate. Given that higher productivity growth in the traded goods sector is likely to be a key feature of most fast-growing developing countries, including Mozambique, it makes sense to modify our measure of the EREER based on relative PPP to take this effect into account.

In the absence of reliable data on sectoral productivity, the Balassa-Samuelson hypothesis is usually tested by regressing the real exchange rate on the overall productivity differential.¹⁷ Output and employment data for the tradables and nontradables sectors tend to be unavailable for most developing countries, however, and are difficult to compare across

¹⁷See, for example, De Gregorio, Giovannini, and Wolf (1994); Rogoff (1996); Kravis and Lipsey (1988); and Frankel (2005).

Figure 10.7. Real Exchange Rate and Per Capita GDP, 2005

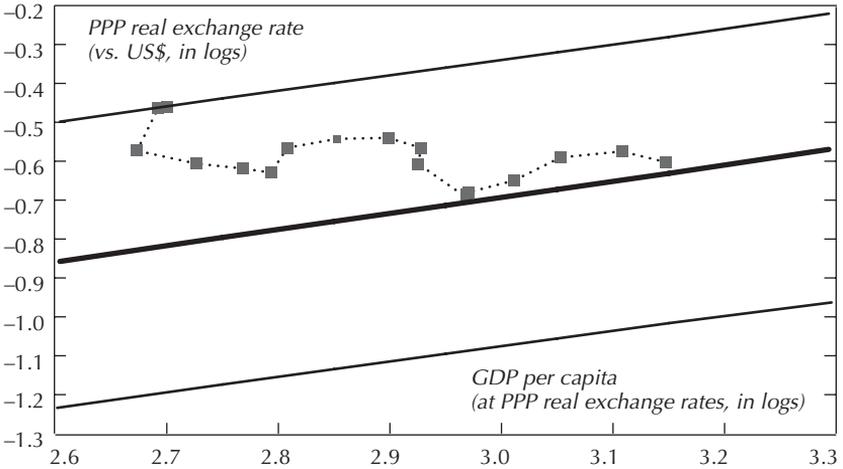
Source: IMF, World Economic Outlook database.

Note: PPP = purchasing power parity.

countries. It is therefore common to use per capita GDP as a proxy for productivity in the tradables sector.

Figure 10.7 plots the relationship between the real exchange rate (calculated using the PPP conversion factor) against GDP per capita at PPP exchange rates for 180 countries in 2005. As predicted by the Balassa-Samuelson hypothesis, there exists a clear positive relationship between the real exchange rate and productivity. Our estimates suggest that, on average, a 1 percent increase in PPP GDP per capita is associated with a real appreciation of 0.39 percent, which is consistent with the results from earlier studies. For example, Rogoff (1996) found a slope of 0.37 for a sample of 100 countries in 1990. De Broeck and Sløk (2001) repeated this estimate for a sample of 149 countries in 1999 and found a slope of 0.41. Frankel (2005) found a slope of 0.38 for a sample of 118 countries in 2000.

Based on the estimated equilibrium relationship between the real exchange rate and productivity differentials, we can obtain an estimate of the extent to which the Mozambican exchange rate has been undervalued or overvalued. The thick solid line in Figure 10.8 indicates the estimated equilibrium relationship between the real exchange rate and productivity, while the two thinner solid lines add or subtract 1.96 standard deviations from the estimated relationship—equivalent to a 95 percent confidence interval—to include some measure of the uncertainty surrounding the

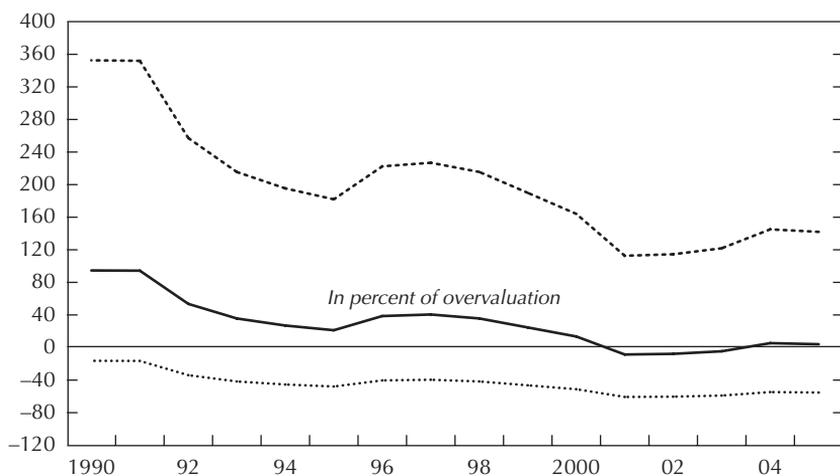
Figure 10.8. PPP Equilibrium Exchange Rates, 1990–2005

Sources: IMF, World Economic Outlook database; and IMF staff estimates.

Note: PPP = purchasing power parity.

estimate of the EREER. The dashed line plots the actual evolution of Mozambique's PPP real exchange rate against Mozambique's GDP per capita. The difference between the dashed and dotted lines can thus be interpreted as a measure of real exchange rate misalignment.

The results suggest that the Mozambican real exchange rate has been approaching equilibrium but may still be slightly overvalued. Figure 10.9 plots the percentage difference between the actual and equilibrium real exchange rates together with one standard error bands. These estimates suggest that the real exchange rate may have been overvalued at the beginning of the 1990s (during the civil war), moved toward convergence with the equilibrium exchange rate in 2000, and then been undervalued by about 10 percent in 2001. During 2002–04, the metical moved back toward convergence with the equilibrium exchange rate as a result of a real appreciation. In 2004, however, the exchange rate was once again overvalued, this time by about 5 percent, in response to unexpectedly high foreign exchange inflows that were not fully sterilized. Most of this overvaluation was undone in 2005, with the introduction of the foreign exchange auction system, although there is evidence that the real exchange rate may still be slightly overvalued. However, given the high degree of statistical

Figure 10.9. Estimated Real Exchange Rate Misalignment, 1990–2005

Sources: IMF, World Economic Outlook database; and IMF staff estimates.
 Note: Dotted lines are standard error bands.

uncertainty, the level of misalignment is far outside the 95 percent confidence interval and is therefore not statistically significant.

These results are subject to a number of important caveats. First, the data used for this analysis, in particular the data on per capita GDP and the price data used for calculating PPP exchange rates, are subject to significant uncertainty. Second, this approach implicitly assumes that the only determinant of the equilibrium real exchange rate is GDP per capita (productivity), which may be too simplistic. Finally, the equilibrium real exchange rate path is estimated for a large number of countries and does not take into account country-specific factors that may lead to different equilibrium exchange rate paths for different countries. The next section will attempt to deal with some of these caveats.

The Fundamental Equilibrium Exchange Rate

The aim of this section is to analyze the EREER for Mozambique using the FEER framework estimated using the Johansen approach to cointegration (Johansen, 1988, 1991, 1995). The underlying equilibrium real exchange rate is the value of the REER that results in simultaneous attainment of internal and external equilibrium in the economy. Internal

equilibrium is achieved when the nontradable goods market clears in the present period and is expected to clear in future periods. External equilibrium is achieved when the current account balance is at a sustainable level consistent with long-run capital flows.

The FEER approach addresses some of the weaknesses of the relative PPP methodology applied in the previous section. While there is not much we can do about measurement errors in the data, the inclusion of more variables that researchers have argued are determinants of the EREER will help us obtain a more precise estimate of the equilibrium real exchange rate path and thus enable us to analyze with more precision the extent to which the REER in Mozambique is misaligned. Moreover, by using a time-series rather than a cross-section approach, our results will incorporate country-specific information about the EREER.

The analysis was carried out using the trade-weighted REER constructed using the inflation rate based on the consumer price index (CPI) in Maputo. The analysis is based on the following long-run relation between the REER and its fundamentals:

$$\ln(\text{REER}) = \alpha_0 + \alpha_1 \ln(\text{TOT}) + \alpha_2 \ln(\text{GOV}) + \alpha_3 \ln(\text{INV}) + \ln(\text{PROD}) + \alpha_5 \ln(\text{OPEN}) + \text{FDI} + \varepsilon_t,$$

where

- \ln denotes the natural logarithm and ε_t is an error term with the usual properties.
- TOT is defined as the terms of trade of goods.¹⁸ An increase in the terms of trade will increase the demand for domestic goods, resulting in an increase in the relative price of nontradables. Hence, the expected sign is *positive*.
- GOV is defined as the share of government current expenditure in GDP.¹⁹ An increase in government current expenditure will lead to either an increase or a decrease in the EREER, depending on the share of government current expenditure on tradable and nontradable goods. The expected sign is therefore *ambiguous*.
- INV is defined as the ratio of credit to the private sector to GDP.²⁰ A rise in the ratio of credit to the private sector to GDP will shift spending toward tradable or nontradable goods depending on the

¹⁸The measurement and plots of each variable, together with data sources, are given in the appendix.

¹⁹This is a proxy for government demand for nontradables.

²⁰This is a proxy for investment.

import content of investment and thus cause either a depreciation or an appreciation. Hence, the expected sign is *ambiguous*.

- *PROD* is a measure of technological progress and is proxied by the real GDP per capita in Mozambique relative to its trading partners. The inclusion of technological progress captures the Balassa-Samuelson effect. Hence, an increase in productivity will lead to an appreciation of the REER and the expected sign is *positive*.
- *OPEN* is a measure of the degree of capital controls and restrictions and is measured as the sum of exports and imports as a share of GDP. A reduction in controls will tend to increase the total amount of trade. The equilibrium response of the REER will depend on whether this leads to a deterioration or an improvement in the current account.²¹ If the current account deteriorates, a depreciation of the REER is required, whereas the reverse is true if the current account improves. Hence, the expected sign is *ambiguous*.
- *FDI* is defined as the ratio of foreign direct investment to GDP and is used as a proxy for capital inflows. An increase in capital inflows would be expected to appreciate the REER. Hence, the expected sign is *positive*.

Unit root tests provide evidence that most of the variables are nonstationary in levels but stationary in first-differences, which is a precondition for cointegration to exist between the level variables. In particular, we are unable to reject the null hypothesis of a unit root for any of the variables apart from the ratio of FDI to GDP at the 5 percent level. ADF (augmented Dickey-Fuller) tests on the first-differenced variables reject the null hypothesis of a unit root for all variables with the exception of the terms of trade, which show some evidence of being integrated of order two.

The cointegration analysis suggests that there exists a long-run relationship between the REER and the underlying fundamentals. The starting point for this analysis was a (vector autoregression) VAR with 3 lags, estimated on data from the first quarter of 1998 to the third quarter of 2006.²² Statistical tests suggest that the model can be reduced to 2 lags but that any further reduction in the number of lags is rejected statistically

²¹Given that most of the trade liberalization has been done by developed countries, not by developing countries, it is likely that the effect of increased trade will be an improvement in the current account.

²²It is worth noting that because GDP is only available on an annual basis, quarterly data on GDP in Mozambique were constructed from annual GDP using a methodology similar to that of Adam (1999).

at the 5 percent level. Hence, we proceed with the analysis using a VAR with 2 lags.²³

The existence of one cointegrating relation is confirmed by the Maximum Eigenvalue test at the 1 percent level and the Trace test at the 5 percent level. Table 10.5 reports the results from rewriting the VAR as a Vector Error Correction Model (VECM) with one cointegrating vector. The estimated parameters are broadly consistent with the predictions from economic theory. In particular, our results suggest that the REER has appreciated in response to

- Relative productivity growth (the Balassa-Samuelson effect). In particular, a 1 percent increase in productivity is associated with a 0.53 percent appreciation of the REER.
- Improvements in the terms of trade. A 1 percent improvement in the terms of trade is associated with a 0.67 percent appreciation in the REER.
- Increases in the share of government current expenditure in GDP. In particular, a 1 percent improvement in the ratio of government current expenditure to GDP is associated with a 0.85 percent appreciation of the REER.
- Increases in the share of FDI in GDP. In particular, a 1 percentage point increase in the ratio of FDI to GDP is associated with a 0.03 percentage point increase in the REER.
- A decrease in the openness of the economy. In particular, a 1 percentage point decrease in the measure of openness is associated with a 0.71 percent depreciation of the REER.

With the exception of FDI and private sector investment, which are statistically significant at the 5 and the 10 percent levels, respectively, the effect of all the fundamentals is significant at the 1 percent level.²⁴ Finally, the coefficient on the cointegrating vector in the VECM implies that in the absence of further shocks, half of the disequilibrium would be eliminated in about 1.8 years.

Measuring the degree of misalignment requires constructing an unobserved variable, the EREER, which requires decomposing the fundamentals into permanent and transitory components. In particular, the EREER

²³After the inclusion of three impulse dummies, which can be justified on statistical and economic grounds, the VAR appeared well specified.

²⁴As a rule of thumb, the parameter is significant at the 10 percent level when the *t*-statistic is above 1.8, at the 5 percent level when the *t*-statistic is above 2, and at the 1 percent level when the *t*-statistic is above 3. The exact thresholds depend on the degrees of freedom.

Table 10.5. Estimates of FEER Long-Term Relation¹

Constant	-0.59
Terms of trade	0.65 [4.76]
Government consumption	0.85 [6.77]
Investment	0.11 [1.85]
Productivity	0.53 [7.26]
Openness	-0.71 [-12.06]
FDI	0.03 [2.51]
Half-life of deviation ²	7.22

Source: Author's estimates.

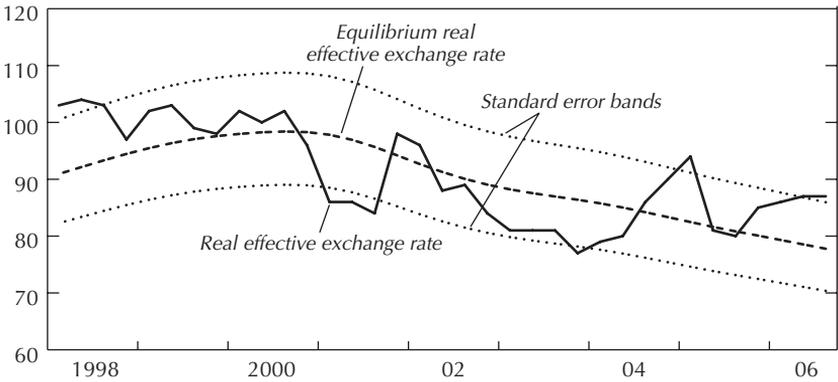
Note: FEER denotes fundamental equilibrium exchange rate.

¹Numbers in brackets refer to *t*-statistics.

²The half-life of deviation is derived from the error correction model. A half-life of 1 implies that 50 percent of any misalignment will be corrected in one quarter.

is defined as that value of the REER which is consistent in the long run with the *equilibrium* value of the fundamentals. As is common in the literature, we construct a measure of the equilibrium by extracting the permanent component of each fundamental. In this paper we apply the Hodrick-Prescott (HP) filter, which has become a popular choice among business cycle analysts.²⁵ We also assess whether the implied misalignments are significantly different from zero by plotting the 95 percent confidence interval as in the previous section. Figure 10.10 plots the estimated equilibrium rate together with the actual REER. The results show that Mozambique's REER has remained broadly in line with fundamentals during much of the sample but may also have experienced periods of misalignment. In particular, the REER appears to have been slightly overvalued in 1998 and 1999 at a time when the EREER was appreciating rapidly in response to increases in productivity relative to Mozambique's main trading partners. This appears to have been followed by a period of undervaluation in 2001 and in 2003. As noted previously, the exchange rate was tightly managed in 2003, which may have contributed to exchange rate misalignment. There is some evidence that the appreciation at the end of 2004 resulted in overvaluation at the end of 2004 and beginning of 2005. As noted previously, the new auction mechanism in January 2005 led to a sharp depreciation of the REER, which appears to have led to a realign-

²⁵A smoothing coefficient of 1600 was used, as is common for quarterly data.

Figure 10.10. Equilibrium Real Exchange Rate, 1998–2006

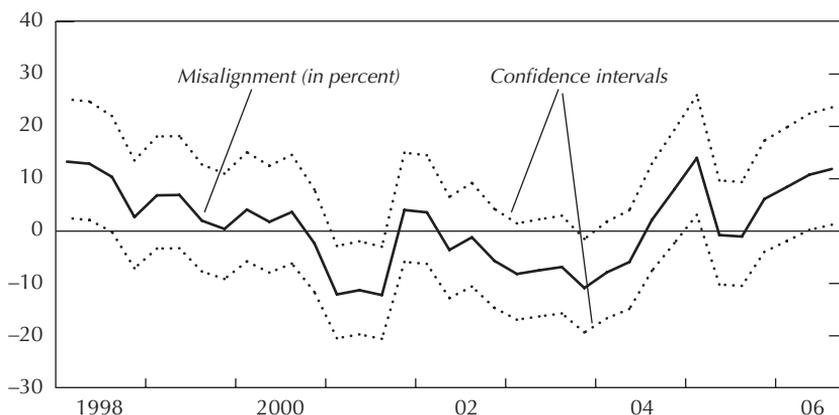
Source: IMF staff estimates.

ment with the EREER in the second half of 2005. Until June 2007, when the exchange rate bands were abolished, the REER had started to appreciate while the EREER continued to depreciate. As a result, the analysis provides some indication that Mozambique's REER may have been slightly more appreciated than its underlying equilibrium.

Figure 10.11 plots the degree of misalignment in percentage terms together with standard error bands and suggests that the REER may have been overvalued by 11 percent at end-2006. Because of statistical uncertainty, however, the actual misalignment may have been as little as 1 percent. Taken together with the results from the previous section on the EREER constructed using PPP, these results provide some evidence to suggest that the economy may have been less competitive than is implied by its economic fundamentals. In other words, Mozambique's export performance may have been weaker than it could have been if the REER had been aligned with its underlying equilibrium rate.

Causes Underlying the Possible Misalignment of the REER in Mozambique

The results in the previous section suggest that Mozambique's REER may have been slightly overvalued until the exchange rate bands were removed. As noted previously, such departures of the REER from equilibrium, to the extent that they are more than temporary phenomena, may

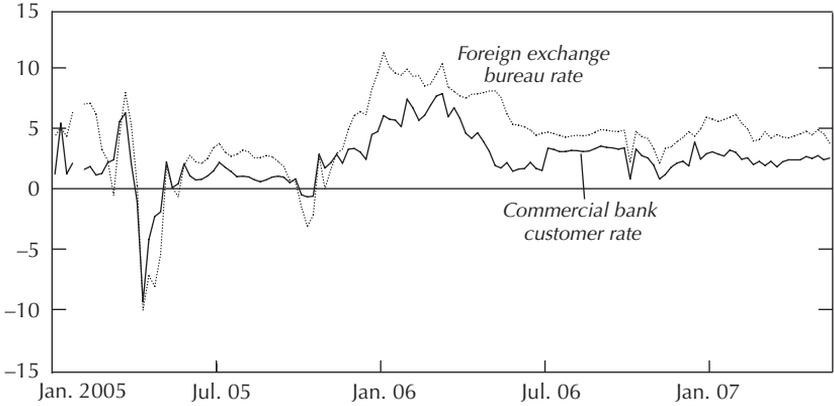
Figure 10.11. Equilibrium Real Exchange Rate, 1998–2006

Source: IMF staff estimates.

imply the existence of imbalances in the economy that need to be corrected through macroeconomic adjustment. In the case of Mozambique, the emergence of significant overvaluation from the end of 2005 onward coincides with the introduction of new regulations limiting the daily variation in exchange rates. This suggests that the exchange rate restrictions that were in place until June 2007 may have partly explained why the REER appeared to be slightly misaligned. The aim of this section is to examine the nature of these exchange rate restrictions and to evaluate to what extent they may help explain why the REER appears to have been somewhat overvalued.

As noted previously, the Bank of Mozambique introduced a temporary band in both the foreign exchange auctions and the interbank market in November 2005 in response to volatility in the foreign exchange market. Initially, the band in the auction market led to a widening of the spread between the auction rate and the rate charged by banks to customers and foreign exchange bureaus (see Figure 10.12). The band in the interbank market also discouraged transactions between banks at quoted rates in the interbank market, although transactions continued outside the interbank market (see Figure 10.13).

In mid-December 2006, the Bank of Mozambique moved to increase the band limiting the daily variation in the interbank market exchange rate from 0.25 percent to 1 percent. As Figure 10.14 shows, this coincided with an increase (depreciation) of 2 percent in the interbank market quotation

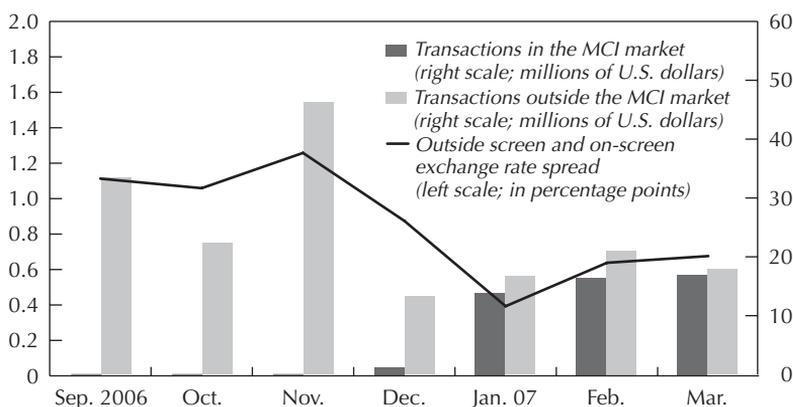
Figure 10.12. Exchange Rate Spreads over Auction Rate*(In percent)*

Source: Mozambican authorities.

rate, while the spread between the quotation rate and the rate outside the interbank market declined. Hence, the loosening of the band appears to have led to a depreciation of the nominal exchange rate, suggesting that prior to that the nominal exchange rate might have been slightly overvalued. The depreciation of the interbank market quotation rate also led to transactions taking place in the interbank market (see Figure 10.13), since on-screen quotations by banks could move closer to the rate outside the interbank market (see Figure 10.14).

At the same time, Figure 10.14 shows that actual on-screen transactions are taking place very close to the upper level of the band, while off-screen transactions are conducted at an even higher rate. As the Bank of Mozambique has pointed out, the primary interbank market rate and the secondary rate outside the interbank market should not be expected to converge completely since there is typically a shortage of foreign exchange that enables banks to sell foreign exchange at a higher rate. However, the fact that interbank market transaction rates are at the upper level of the band suggests that the band may still be binding and, thus, that there may still be pressure on the exchange rate to depreciate further.²⁶ The analysis

²⁶Figure 10.14 includes error bars around the interbank market quotation rate showing the width of the band and thus the maximum deviation of interbank market transaction rates from the quotation rate.

Figure 10.13. Developments in the MCI Interbank Market

Source: Bank of Mozambique.

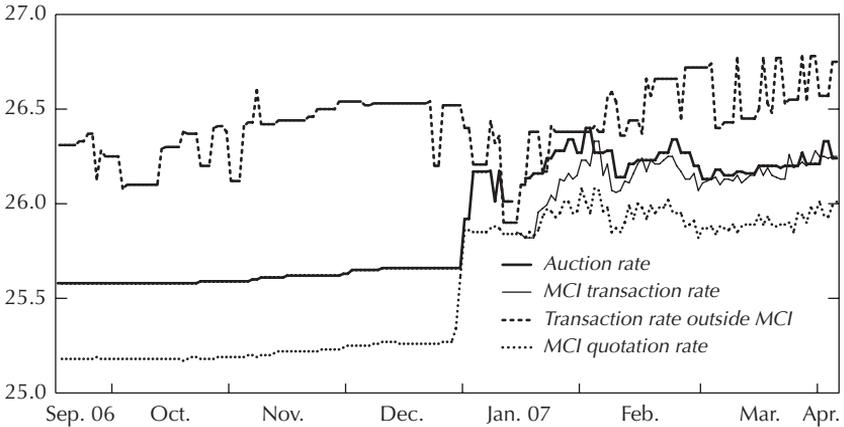
Note: MCI denotes Mozambique's exchange rate interbank market.

therefore suggests that the authorities were right to loosen the exchange rate band in order to bring on-screen and off-screen quotes in line with each other. The abolition of the band should contribute to bringing the REER in line with the underlying equilibrium rate.

Improving Mozambique's Trade Environment²⁷

The previous sections have argued that a key strategy for promoting the competitiveness of the export sector in Mozambique is to maintain a flexible exchange rate. Such a strategy does not, however, eliminate the need for structural reforms aimed at improving competitiveness or measures to diversify the traditional export sector in Mozambique. This follows straightforwardly from the fact that the apparent overvaluation of the REER is a relatively recent phenomenon, whereas we have seen that the relatively unimpressive performance of the traditional export sector has been a feature of the Mozambican economy for at least two decades. The aim of this section is to investigate the potential for undertaking structural reforms with the aim of improving competitiveness, and the extent to which there is scope for increasing Mozambique's market access as a strategy for improving the performance of the traditional export sector.

²⁷This section draws heavily on material in Kvintradze (2007).

Figure 10.14. Nominal Exchange Rates*(In percent)*

Source: Bank of Mozambique.

Note: MCI denotes Mozambique's exchange rate interbank market.

Competitiveness

As noted previously, it is common to use the REER to draw inferences about the competitiveness of the economy. The previous section showed that while the REER appeared to be overvalued until June 2007 relative to the underlying equilibrium rate, the EREER had depreciated by 24 percent since the fourth quarter of 2000, implying that the underlying fundamentals indicate an economy that is substantially more competitive today than it was six years ago. The fact that this has not been associated with an improvement in the performance of the traditional export sector may be due partly to the past overvaluation, but it may also be a sign that the CPI-based REER is an imperfect measure of competitiveness.²⁸

The literature on competitiveness often highlights the importance of the business environment in which firms operate, including the importance of tariff and nontariff barriers. A reduction in tariffs and nontariff barriers to imports reduces input costs and improves allocative efficiency

²⁸Other measures of competitiveness include the REER calculated using unit labor costs in the manufacturing sector. Data on unit labor costs and wholesale prices are unfortunately not available for Mozambique. Estimates using nonfood CPI inflation yielded results similar to those reported in this chapter.

among firms.²⁹ Tokarik (2006) even suggests that tariff reductions work as an “export-promotion” strategy that countries such as Mozambique should pursue independently of the policy stance of other countries.

Table 10.6 suggests, however, that Mozambique’s trade barriers are among the lowest in the region and are lower than those in several ASEAN countries, in part because of its lower nontariff barriers.³⁰ In addition, Mozambique’s trade-weighted average tariff is low in comparison with several others in southern Africa. However, given that the simple average tariff remains relatively high (see Table 10.7), there may be still some scope for further tariff reductions.³¹

Data on export-tax equivalents of tariff barriers computed by Tokarik (2006) provide further evidence for the fact that there may be scope for reducing tariff rates in Mozambique. As Table 10.8 shows, Mozambique’s tariff structure (using 2001 data) imposes an effective tax of between 9.6 and 10.8 percent on exports, depending on methodology.³² This is substantially higher than the tariffs of other fast-growing countries in sub-Saharan Africa, such as Botswana, but lower than those of many Asian countries. Results from the same study suggest that Mozambique could raise the value of its exports by 8.7 percent if import tariffs were reduced by 100 percent. This provides strong arguments for further tariff reductions.³³

²⁹Low tariff barriers provide part of the explanation for the rapid rise of megaprojects in Mozambique. As a result of their classification as export-processing zones, megaprojects benefit from, among other things, duty-free entry of goods, on-site customs facilities, and various tax incentives.

³⁰It should be noted, however, that this may simply reflect better information on nontariff barriers in the ASEAN countries.

³¹Trade-weighted average tariffs may be more useful as a measure of protectionism if imports are concentrated in a few product categories. However, they may also be misleading if high tariffs discourage imports of some products, which therefore have a low weight in the calculation of the trade-weighted tariff. Mozambique started to gradually reduce its maximum tariff in 1999. The maximum tariff is currently 20 percent, down from a pre-1999 level of 35 percent.

³²The first approach calculates the export tax necessary to keep real income constant if import tariffs are eliminated, while the second approach keeps export volumes constant.

³³Further trade liberalization must also be weighed against the cost of lower tariff revenues. Alfieri, Rawlinson, and Cirera (2006) estimate that Mozambique’s tax revenues may fall between 28 and 30 percent as a result of further trade liberalization in the Southern African Development Community and unilateral most-favored-nation liberalization. These results underline the importance of ongoing efforts to expand Mozambique’s revenue base. However, reducing tariffs will also help reduce smuggling, which, according to anecdotal evidence reported by Arndt (2005), may be important in Mozambique. This

Table 10.6. Trade Restrictiveness Index

	Overall (1–10)	Tariff barriers (1–5)	Nontariff barriers (1–3)
Comparators in sub-Saharan Africa			
Mozambique	2	2	1
Angola	1	1	1
Congo, Dem. Rep. of	2	2	1
Madagascar	2	2	1
Zambia	2	2	1
Mauritius	4	1	2
Botswana	5	2	2
Lesotho	5	2	2
Namibia	5	2	2
South Africa	5	2	2
Swaziland	5	2	2
Tanzania	5	2	2
Zimbabwe	6	3	2
Comparators in Asia			
Indonesia	4	1	2
Malaysia	4	1	2
Thailand	5	2	2

Source: IMF.

Some progress has already been made in improving the business climate in Mozambique. However, there is increasing recognition of the need for a strategy to improve Mozambique's rankings in terms of the ease of doing business (140th out of 175 countries; World Bank, 2006) and competitiveness (128th out of 131 countries in the Global Competitiveness Index; World Economic Forum, 2007). However, the distance between Mozambique's ranking in the World Bank's index and the rankings of India (134), China (93), and some of the ASEAN countries (the lowest ranking was 135) is much smaller. The fact that these countries have been successful in dramatically improving the performance of their export sectors suggests that a business environment conducive to private sector development and export growth may be within Mozambique's reach if a well-targeted strategy for improving the business climate can be implemented. This may be particularly true for the manufacturing sector, which is especially reliant on a conducive business environment and which we have argued previously is often viewed as the engine of export-led growth.³⁴

is consistent with large discrepancies between export data reported by Mozambique and import data reported by neighboring countries.

³⁴Cadot and Nasir (2001) report some results that suggest that production costs in Mozambique's garment industry (a typical manufacturing industry) are among the lowest in sub-Saharan Africa. Despite this, Mozambique's garment export industry is significantly

Table 10.7. Average Tariff

	Trade-weighted average tariff	Simple average tariff
Comparators in sub-Saharan Africa		
Mozambique	9.1	12.1
Mauritius	2.2	3.1
Angola	5.4	7.2
South Africa	5.8	7.7
Tanzania	8.1	12.7
Madagascar	9.2	13.5
Namibia	9.6	7.7
Swaziland	9.6	7.7
Zambia	9.6	13.4
Botswana	11.1	7.7
Lesotho	16.8	7.7
Zimbabwe	18.0	16.2
Congo, Dem. Rep. of	n.a.	12.0
Comparators in Asia		
Indonesia	6.2	7.0
Malaysia	4.2	7.3
Thailand	6.2	11.9

Source: IMF Trade Restrictiveness Index.

The main elements of such a strategy, which is being formulated by the Ministry of Industry and Commerce with assistance from the World Bank, are summarized in Chapter 9 and will therefore not be discussed further here. It seems clear, however, that the successful implementation of such a strategy will be one of the main priorities for improving the performance of the traditional export sector, and manufacturing exports in particular, in Mozambique.

Market Access

In addition to implementing measures to improve competitiveness, a key determinant of Mozambique's export performance is the access Mozambique's exporters have to foreign markets. Mozambique exports mainly to countries where it enjoys preferential market access, in particular the countries of the Southern African Development Community (SADC) and the European Union (EU), and the United States (see Table 10.9). Mozambique has preferential market access to Southern African countries under the SADC Trade Protocol, to the EU under the Cotonou

less successful than those in Lesotho and South Africa, which have higher production costs but operate in a significantly better business environment.

Table 10.8. Export-Tax Equivalents of Import Tariffs*(In percent; based on 2001 data)*

	Real income constant	Export volume constant
Comparators in sub-Saharan Africa		
Mozambique	10.8	9.6
Malawi	9.8	9.8
Zambia	8.6	8.4
South Africa	6.2	6.1
Tanzania	14.1	13.2
Botswana	3.7	3.3
Comparators in Asia		
India	31.0	28.5
Vietnam	12.7	12.6
China	12.1	12.0
Philippines	9.7	5.4
Malaysia	5.0	4.4
Thailand	16.5	11.5

Source: Tokarick (2006).

Agreement and Everything But Arms (EBA) initiative, and to the United States under the African Growth and Opportunity Act (AGOA).

Mozambique benefits, in particular, from its close proximity to South Africa. Under the SADC Trade Protocol, Mozambique's exports have preferential access to the lucrative South African market, which absorbs more than 15 percent of Mozambique's exports. Moreover, South Africa accounted for more than 11 percent of FDI in Mozambique in 2005. The importance of FDI from South Africa is likely to continue in the future following the South African central bank's relaxation of capital controls on investments in the SADC.

Until recently, a key difference between East Asia and sub-Saharan Africa was the former's emphasis on liberalizing trade relations on a broad multilateral basis, following the most-favored-nation (MFN) principle underlying successive rounds of trade negotiations under the aegis of the World Trade Organization (WTO), whereas the expansion of exports from sub-Saharan Africa has typically been based on regional or bilateral preferential trading arrangements. In observing the MFN principle, countries levy tariffs or impose other restrictions without consideration for the origin of the goods or services imported, extending equal access to their markets to all exporting countries. Regional or bilateral trading agreements, on the other hand, extend preferential access only to goods and services from the countries participating in the agreements.

Vamvakidis (1998) and the World Bank (2004) are among several studies that have argued that economies grow faster after broad-based

Table 10.9. Destination of Mozambique's Exports*(In percent of total exports)*

	1991–2001	2002–05
Exports to industrial countries	57.50	66.16
United States	7.86	1.47
European Union	40.09	63.86
Exports to Africa	29.38	23.10
South Africa	16.23	15.75

Source: IMF, Direction of Trade Statistics database.

multilateral liberalization than after discriminatory liberalization. This conclusion reflects the widespread view that regional or bilateral trade arrangements can lead to welfare-reducing trade diversion in addition to welfare-improving trade creation if trade is diverted from a more efficient exporter to a less efficient one. Other studies have argued that overlapping trade agreements—sometimes referred to as the noodle bowl of bilateral and regional trade agreements—increase the complexity of the world trading system and might impose administrative costs on trade. As a result, the World Bank (2004) has estimated that sub-Saharan Africa would stand to lose 0.7 percent of its GDP if all the countries in the region negotiated bilateral free trade agreements on manufacturing products with Australia, Canada, the European Union, Japan, New Zealand, and the United States. Yang and Gupta (2005) argue that the costs could be even higher because (1) not all countries want to negotiate bilateral free trade agreements with African countries; (2) complex rules of origin can be and have been used to restrict market access; and (3) sub-Saharan countries trying to negotiate and implement multiple bilateral free trade agreements are hampered by capacity constraints.

Mozambique has been more successful than most other sub-Saharan African countries in simplifying its trading arrangements. It is a member of only one regional trade arrangement (SADC) and has thus been able to avoid the confusion associated with participating in overlapping trade agreements. This was one of the rationales for Mozambique's decision to suspend its participation in the Common Market for Eastern and Southern Africa (COMESA) in 1995. However, given developments in Mozambique's traditional export sector and taking into account the other arguments made above, it is not clear that preferential trade arrangements have made an unambiguously positive contribution to Mozambique's export performance. Moreover, because of further trade liberalization, whether through an increasing number of regional or bilateral free trade agreements or through further multilateral liberalization stemming from,

for example, the WTO Doha Round of trade negotiations, African countries are likely to experience the erosion of trade preferences, which may hurt their export sectors.

The preceding discussion on market access has a number of implications for policies that may improve the performance of Mozambique's export sector in the medium term.³⁵ First, Mozambique should strive to ensure that African countries contribute to making the Doha Round a success. Numerous studies and the experience of many Asian countries suggest that African countries stand to make substantial gains from further multilateral trade liberalization. Second, Mozambique should work toward reducing trade barriers against countries that are not members of existing or future free trade agreements to avoid the trade-diverting effect inherent in these agreements. Third, Mozambique should undertake structural reforms to improve competitiveness and diversify its export base so as to minimize the effect of preference erosion on its export sector.

Conclusions and Policy Implications for Mozambique

This chapter has analyzed the performance and competitiveness of Mozambique's export sector and discussed possible strategies for increasing the impact of the export sector on the economy. Our analysis suggests that although exports have been growing rapidly during the past few years, this is due largely to developments in the megaproject export sector, especially aluminum. While megaprojects have clearly had a positive effect on the Mozambican economy, it was noted in the introduction to this chapter that their importance should not be overstated. In particular, diversifying the export base to include non-megaprojects appears to be a precondition for translating Mozambique's impressive growth into employment generation and poverty reduction.

While the CPI-based REER does not suggest that Mozambique's competitiveness has been deteriorating, our results do suggest that the REER may have been slightly overvalued and thus that there is scope for competitiveness to improve. We have argued that evidence of real exchange rate misalignment in the past has often coincided with periods when the exchange rate was tightly managed. In addition, there is some evidence that many of Mozambique's traditional exports may be facing declining world demand. This, coupled with the concentration of exports in

³⁵See Yang and Gupta (2005) and IMF (2007) for detailed discussions on the policy implications of regional trade arrangements in Africa.

the megaproject sector, suggests that Mozambique should make efforts to diversify its export base, especially toward manufacturing exports, which are thought to be particularly important for export-led growth.

While a possible overvaluation of the REER is a fairly recent phenomenon, the relatively disappointing performance of Mozambique's traditional export sector is not. This suggests that revitalizing Mozambique's traditional export sector requires structural reforms to improve competitiveness and address the lack of export diversification, in particular the lack of non-megaproject manufacturing exports. A cornerstone of the drive toward increasing competitiveness is the development of a strategy to improve the business climate in Mozambique, which is discussed in Chapter 9. In addition, Mozambique should endeavor to play a positive role in the move toward further broad-based MFN trade liberalization while striving to make existing and future regional trade arrangements less discriminatory toward nonmembers and promoting liberal rules of origin. The implementation of these measures will be key to increasing the contribution of the non-megaproject export sector to economic growth and helping Mozambique achieve its ambitious growth and poverty reduction targets.

Lessons for Sub-Saharan Africa

While focusing on Mozambique, this chapter contains a number of conclusions with clear policy implications for other sub-Saharan countries. First, while export growth is important, efforts should be made to ensure that export growth in sub-Saharan Africa makes a positive contribution to income levels, job creation, and poverty reduction. Given that many sub-Saharan African countries are rich in natural resources, this requires putting in place a regime that balances the need to attract foreign direct investment against the aim of maximizing each country's returns from its resource endowments. As discussed in Chapter 8, Mozambique is making important strides in this regard by putting in place a fiscal regime for the mining and petroleum sectors.

Second, expanding the contribution of the export sector requires a broadening of the export base beyond capital-intensive natural resource projects while diversifying into products that are dynamic in the world marketplace. This requires putting in place a strategy to improve competitiveness and the business climate, and reducing trade barriers.³⁶ With

³⁶The lessons for the rest of sub-Saharan Africa with respect to the business climate are discussed in Chapter 9.

respect to the latter, Mozambique's experience suggests that sub-Saharan African countries may benefit from reducing their participation in overlapping and conflicting regional trade arrangements and instead focusing on further MFN liberalization.

With respect to competitiveness, Mozambique's experience underlines the importance of careful monitoring of the real exchange rate to ensure that it does not become overvalued. This is particularly true for countries in sub-Saharan Africa, which, because of increases in capital inflows that are due to the scaling up of aid and to the exploitation of natural resources, are prone to Dutch disease effects and possible exchange rate overvaluation.³⁷ In that regard, Mozambique's experience suggests that misalignment of the real exchange rate is typically associated with an exchange rate that is tightly managed. This provides some justification for greater exchange rate flexibility in the face of sharp increases in capital inflows.

Appendix. Variable Definitions and Sources

The dataset used for estimation purposes consists of quarterly observations for 1996–2004. The “foreign” variable (used for the calculation of the productivity proxy) was calculated as the renormalized weighted average of the five trading partners based on the Information Notice System (INS) weights for the real effective exchange rate. For Mozambique the partner countries (weights) were South Africa (0.46), Portugal (0.11), France (0.07), the United States (0.06), Japan (0.05), Germany (0.04), Spain (0.04), the United Kingdom (0.04), Italy (0.03), Canada (0.02), the Netherlands (0.02), Belgium (0.02), Korea (0.02), and Thailand (0.01). Quarterly GDP for Mozambique was constructed from annual data using an approach similar to that in Adam (1999).

The definitions and sources for the variables are as follows:

The real effective exchange rate

Source: Information Notice System (INS) and IMF staff calculations.

Ratio of public current consumption expenditure to GDP

Source: IMF staff estimates.

Terms of trade

Source: IMF, World Economic Outlook database.

Ratio of domestic credit to the private sector to GDP

Source: IMF staff estimates.

³⁷See Chapter 9 for details.

Real per capita GDP relative to main trade partners, normalized to 1 in 2000 with weights as discussed above

Source: IMF, *World Economic Outlook database and staff estimates*.

Ratio of sum of exports and imports to GDP

Source: IMF, *World Economic Outlook database*.

Ratio of net foreign direct investment (current prices) to GDP

Source: IMF *staff estimates*.

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