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A Critical Evaluation of Exchange Rate Policy in Turkey

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Summary. — This paper reviews and critically evaluates the exchange rate policy followed in Turkey in the post-1980 period during which a far-reaching program of liberalization has been launched. We conclude that the new exchange rate policy has been essential for Turkey's regaining its creditworthiness. Furthermore, it has positively contributed to growth of output and exports, and to expansion of tradables production relative to nontradables. Persistence of inflation and weakness of private investment in tradables overshadow the successes recorded in other areas, and cast doubt over the sustainability of Turkey's outward orientation. We argue that the root cause of these problems has been inconsistencies between overall economic policies, rather than the exchange rate policy itself. We compare the period of real appreciations since late 1988 with the earlier period of real depreciations, and draw policy implications.

1. INTRODUCTION

In 1980 Turkey embarked on a far-reaching program of stabilization and structural change. While the immediate objective of the program was to bring a solution to the dual problem of inflation and external deficit, the policy makers also aimed at changing the development strategy of the country from an inward looking to an export-oriented one. After more than a decade of experience with liberalization and structural adjustment, the Turkish economy exhibits a mixed record. Achievement of an impressive growth in exports, regaining international creditworthiness, and resumption of the GNP growth are the areas which the economic policies pursued in the past 10 years should be, and frequently are, credited. Yet, these successes should be balanced against the continuing problems of high inflation and growing public sector borrowing requirements. Moreover, failure to mobilize private investment into tradables casts doubt over the long-term prospects of the liberalization program.[1]

The purpose of this paper is to review and critically evaluate the exchange rate policy followed in Turkey during the post-liberalization period. The motivation behind the paper is twofold. First, exchange rate management is an area in which the greatest departures from past policies have been observed (Aricanli and Rodrik, 1990a), and the Turkish policy makers commonly acknowledged the exchange rate as a key policy instrument "that played a crucial role in Turkish stabilization and adjustment" (Saracoglu, 1987, p. 138). Second, these observations are not unique to the case of economic liberalization in Turkey. One of the major lessons taken from the experience of the Southern Cone countries is that exchange rate policy is key to the success or failure of the stabilization-liberalization programs (Corbo and de Melo, 1987). While the exchange rate issues in Latin America have been the subject of extensive research activity, the experience of Turkey with

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exchange rates during liberalization has not been sufficiently analyzed in the literature.[2] The objective of this paper is to provide a critical evaluation of exchange rate policy in Turkey which would be of interest not only for analyzing the Turkish liberalization but also for comparing it to similar programs initiated in other economies.

The paper is organized as follows. Section 2 provides a partial overview of the recent macroeconomic developments in the Turkish economy. Section 3 presents a review of exchange rate management in Turkey. In section 4 we critically evaluate the exchange rate policy in the post-liberalization period. Section 5 is devoted to concluding comments.

2. RECENT MACROECONOMIC PERFORMANCE OF THE TURKISH ECONOMY

Table 1 displays several selected macroeconomic indicators of the Turkish economy in the post-1980 period. The country entered 1980 with a triple-digit inflation rate and a severe balance-of-payments crisis. The crisis was caused mainly by overvaluation of the domestic currency as a result of following a fixed exchange rate regime despite high and accelerating inflation. The principal consequence of the external disequilibrium has been substantial cuts in imports with resulting adverse impacts on output supply and inflation. Following the fall of the output level in 1979 and 1980, largely due to the lack of imported inputs, GNP growth resumed first at a moderate rate by Turkish standards and then accelerated to 8% in 1986. Starting in 1988 the GNP growth slowed down considerably but it exceeded 9% in 1990.

The output recovery was led initially by the improvement of the foreign balance which, in turn, was due to impressive growth of exports. After 1986 exports stagnated, but a very strong recovery of domestic demand drove the GNP growth in the corresponding period.

The success of the new program in the areas of external balance and output growth should be balanced against the persistence of high inflation. The Turkish economy has gone through three stages in the process of controlling inflation. During 1980–82 inflation fell remarkably from 100% to around 25%. During 1983–86 it reaccelerated, nevertheless it was contained at around 40%. In the third phase which started in 1987, inflation accelerated rapidly and authorities lost control over its evolution. Consequently, lowering inflation has once again become the principal problem of the Turkish economy.

Table 1. *Selected macroeconomic indicators*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990*
	(Annual percentage change)										
Real GNP	−1.1	4.1	4.5	3.3	5.9	5.1	8.1	7.4	3.6	1.7	9.1
Exports	−0.8	47.0	24.9	9.1	20.4	11.3	−0.6	36.7	14.4	−0.01	6.5
Imports	14.7	15.7	10.8	13.6	15.5	7.7	13.1	27.5	1.3	16.5	36.4
Real Exchange Rate†	−23.0	−13.3	−10.5	−3.1	−0.4	−0.7	−12.8	−6.7	−1.6	9.7	12.2
Consumer Price Index (1963 = 100)	101.4	33.9	28.3	30.8	47.3	44.9	35.2	59.7	75.8	69.6	60.4
Wholesale Price Index (1963 = 100)	107.2	36.8	25.2	30.6	52.0	40.0	26.7	48.4	71.6	70.0	53.1
M1	58.2	38.1	38.0	44.6	16.1	43.2	56.3	50.4	48.0	65.0	74.8
PSBR‡ (% of GNP)	−10.0	−5.4	−6.0	5.2	−6.5	−4.9	−4.5	−7.8	−6.4	−7.1	−9.4
	(In billions of US dollars)										
Current Account Balance	−3.4	−1.9	−0.9	−1.9	−1.4	−1.0	−1.5	−1.0	1.5	0.97	−1.85
Exports	2.9	4.7	5.9	5.9	7.4	8.3	7.6	10.3	11.9	11.77	12.57
Imports	7.9	8.6	8.5	8.9	10.3	11.2	11.1	14.2	14.3	15.97	21.71

Sources: State Planning Organization (various issues); State Institute of Statistics (various issues); Central Bank of Turkey (various issues).
*Provisional.
†Based on the real effective exchange rate index of the Central Bank of Turkey. A negative sign indicates depreciation.
‡Public sector borrowing requirements.

3. A BROAD OVERVIEW OF EXCHANGE RATE MANAGEMENT IN TURKEY

(a) *Pre-1980 period*

Turkey had a fixed exchange rate system and multiple currency practices until 1980, together with strict exchange controls. External adjustment was achieved through the use of reserves and curtailing imports through a highly protective trade regime. When the external imbalance reached an unsustainable level the Turkish lira was devalued in sizeable magnitudes as was the case in 1970. Inflationary consequences of a strong growth-oriented, inward-looking development strategy followed during the 1960s and most of the 1970s coupled with fixed exchange rates continuously eroded the competitiveness of the export sector. The failure to cut the growth of absorption, overvaluation of the domestic currency and anti-export biases in the trade regime led the country into a balance-of-payments crisis in 1977–78, the severity of which was magnified by the first oil price shock in 1973. The authorities' response was to devalue twice the dollar/lira exchange rate, first by 23% in March 1978 and then by an additional 44% in June 1979. The increased competitiveness, however, was soon eroded by domestic inflation which accelerated due to supply bottlenecks caused by import cuts and lack of effective control on aggregate demand.

(b) *Post-1980 period*

Exchange rate management changed fundamentally with the introduction of the new economic program in 1980. The new exchange rate policy not only brought stabilization measures such as maintaining a realistic real exchange rate but also aimed at liberalizing the exchange and payments system. In accordance with the central orientation of the whole program, exchange rate management has been guided by increased reliance on market forces with the ultimate objective of making the lira convertible.[3]

The 1980–90 period can be divided into three subperiods from the perspective of exchange rate management (see panel B of Table 2 for an illustration).

(i) *January 1980 — May 1981*

This period corresponds to the management of the macroeconomic crisis. Faced with triple digit inflation and a severe balance-of-payments crisis, the authorities assigned the overriding priority to preventing real appreciation of the Turkish lira. First, the lira was devalued by 33% in January 1980. Following that the authorities adopted a

Table 2. *Macroeconomic management*

1980–82	1982–88	1988–90
Panel A: Objectives		
Reducing current account deficit Gaining creditworthiness Restoring growth Lowering inflation	Export orientation Maintaining growth Inflation stabilization	Lowering inflation Export growth
Panel B: Exchange Rate Policy		
Orientation:		
Real depreciation	Real depreciation	Departure from real depreciation
Method:		
Discrete devaluation and a series of frequent devaluation	Daily adjustments	Market floating under the control of the Central Bank
Panel C: Other Policies		
Macroeconomic Policies:		
Restrictive monetary and fiscal policies	Moderately expansionary demand policy up to 1986 Loose demand policy after 1986	Expansionary demand policy, losing of control over budget deficit
Liberalization policies:		
Financial liberalization Partial trade liberalization	Financial liberalization Further trade liberalization Partial capital account liberalization	Further capital account liberalization

flexible approach to exchange rate management. Periodic and small adjustments were made to the exchange rate with increasing frequency in order to offset inflation differentials at home and in major industrial countries, and to provide a competitive edge for exports. Figure 1 displays the evolution since 1979 of the real exchange rate (RER) index of the Turkish lira, and annual percentage changes in the RER are presented in Table 1. Despite high inflation, the Turkish lira depreciated by 23% in real terms in 1980 and by another 13% in 1981. Hence, the exchange rate strategy followed by the authorities enabled them to prevent overvaluation of the Turkish lira while they were combatting inflation through demand management policies.

(ii) *May 1981 — August 1988*

After inflation fell to around 30%, daily adjustments to the exchange rate replaced discrete devaluations. Although the new exchange rate policy has been broadly described as a passive crawl or a relative purchasing power parity rule,[4] it has in fact been a policy of continual real depreciation until 1989. The lira depreciated in real terms at a trend rate of more than 8% during 1980–88. The rate of real depreciation has been significantly higher than the trend rate in the early years of the liberalization program so as to promote the export-led growth, as well as in 1986 and 1987 in response to stagnating exports. On the other hand, concerns over accelerating inflation led the authorities to refrain from sizeable real depreciation in 1984, 1985, and 1988.

(iii) *August 1988 to present*

In August 1988 the Central Bank introduced a system of partial market setting of the official exchange rate. Under this new system, the Central Bank conducts the daily sessions of the interbank spot exchange market composed of banks, special finance institutions and licensed foreign exchange dealers.[5] Simultaneously with these changes in the exchange rate regime, further liberalization of capital movements took place in late 1988 and 1989. Foreign investors and investment funds were allowed to trade freely in the Turkish capital market, and domestic residents can purchase foreign securities freely (Central Bank, 1990). This period represents a significant break with the previous eight years as far as the real exchange rate is concerned. Sizeable real appreciation of the lira for two consecutive years stands in sharp contrast to its continual real depreciation up until 1989. A detailed discussion of this episode is relegated to the next section.

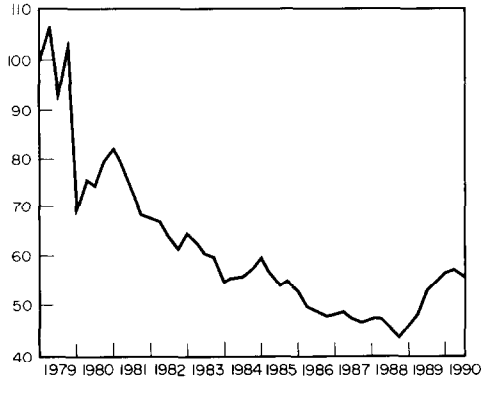


Figure 1. *Real exchange rate index of the Turkish lira (1979 = 100): Real effective rate index of the Central Bank.*

4. CRITICAL EVALUATION OF THE EXCHANGE RATE POLICY

In what follows, we evaluate the exchange rate policy followed since 1980. The analysis is carried out in several stages. We first discuss its orientation and implementation. We then investigate the contribution of the exchange rate policy to the attainment of short-run macroeconomic objectives, its interaction with the intersectoral resource allocation, and its consistency with the overall macroeconomic policies followed in the same period.

Our discussion makes extensive use of the developments in the real exchange rate of the Turkish lira. The real exchange rate is an endogenous variable determined jointly by changes in the nominal rate and inflation. The correct way of approaching the issue is, following Edwards (1989), to treat the nominal exchange rate as a policy instrument and the real exchange rate as an intermediate target. As pointed out by Edwards (1989), under crawling peg the nominal rate is changed frequently to sustain a given real rate. Thus, authorities have a strong control over their intermediate target. This also applies to Turkey, where the policy makers have been able to achieve the desired level of their intermediate target, the RER, almost automatically either through daily revisions of their instrument, the nominal rate (between May 1981 and August 1988), or through frequent interventions in the foreign exchange market (after August 1988). Therefore, in the rest of the paper we center our discussion around changes in the RER.[6]

(a) *Orientation and implementation of the exchange rate policy*

Orientation of the new exchange rate policy should be evaluated in the context of the priorities faced by the policy makers and the strategies envisaged to deal with them. Table 2 provides background for the discussion.

In the beginning of 1980 the policy makers had the difficult task of dealing with a set of intertwined problems associated with the debt crisis of 1978–80. Reducing the sizeable current account deficit and regaining international creditworthiness had to be tackled simultaneously with restoring economic growth and reducing inflation. While many of the countries with debt problems chose to run large noninterest current account surpluses, mainly by cutting expenditures and growth, Turkey opted for a high growth strategy. This option sought to improve the debt-output ratio through output growth and allowed running lower external surpluses (see Anand, Chhibber and van Wijnbergen, 1990, and van Wijnbergen, 1990).

The new exchange rate policy has played a fundamental role in the success of this strategy. As a result of continual real depreciations, output recovery was driven mainly by exports until 1986. Although the new exchange rate policy raised the debt-output ratio through capital losses, it lowered the debt-exports ratio by increasing exports. These developments restored Turkey's creditworthiness and distinguished it from most debtor countries whose debt-exports ratios rose in line with their debt-output ratios. Before considering the consistency of the exchange rate policy with other economic policies we now discuss its implementation.

Figure 2 depicts the real depreciation of the Turkish lira at different rates until 1989 which is followed by a period of real appreciation. These developments are not consistent with a characterization of the exchange rate policy as passive crawl, implying some type of activism on the part of the policy makers. Yet, the nature of policy activism in Turkey should be distinguished from active crawl applied in the Southern Cone countries, commonly known as *tablita*.[7] First, Turkish authorities did not commit themselves to any form of preannounced timetable of depreciations in an attempt to exploit the information content of such announcements. Second, except for a brief period in 1984, they did not opt for using exchange rate as part of an anti-inflationary policy until late 1988. Rather, the strategy was to use exchange rate actively for export promotion. Policy activism in Turkey involves authorities' changing the degree of promoting exports

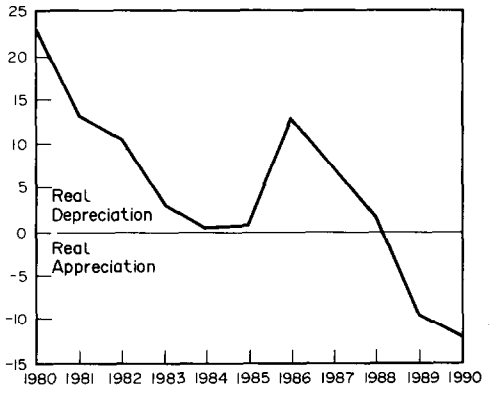


Figure 2. *Annual rates of depreciation/appreciation of the Turkish lira in real terms.*

through real depreciation by taking feedback from the performance of the economy. In particular, the inflationary consequences of real depreciations were recognized and the rate of depreciation was slowed down in the years of accelerating inflation (1984, 1985), and was increased in the years of stagnating exports (1986).

Starting in late 1988 macrocconomic developments in Turkey exhibit a discomforting resemblance to the Latin American experience. Turkish authorities implicitly started to use exchange rate as part of an anti-inflationary strategy, without committing themselves to an explicit scheme. The rate of nominal depreciations fell consistently behind the rate of inflation and the result was a sizeable real appreciation for two consecutive years. This represents a dramatic change in the orientation of the policy from previous years and reflects a change in the priorities of the policy makers whereby export performance is subordinated to the objective of disinflation (see Table 2 for an exposition).

The driving forces behind real appreciation were essentially similar in Turkey and the Southern Cone countries.[8] In both cases the root cause of the problem has been slowing down the rate of depreciation without at the same time following mutually consistent demand policies, and attempting to disinflate without deploying stable nominal anchors. Deterioration of public finance worked hand in hand with the wealth effects associated with real appreciation to increase total domestic absorption above the levels consistent with the intended path of exchange rates.[9] These factors prevented inflation from falling, despite the favorable impact of smaller depreciations on prices. Consequently, the attempts to stabilize exchange rates for disinflating, without correct-

ing underlying budget deficits, led mainly to real appreciation and deterioration of the trade account with no significant effect on lowering inflation.

The similarity between the Turkish and Latin American experiences with real appreciation also extends to the area of sequencing of economic liberalization. In both instances we observe liberalizing of the capital account without achieving stabilization, and fiscal consolidation. Increased public sector borrowing requirements raises the domestic real interest rates above foreign rates and triggers capital inflows, which in turn exerts additional upward pressure on the real exchange rate. The Southern Cone experience demonstrates that this process continues until real appreciation becomes unsustainable and ends with a speculative attack on the currency (Connolly, 1986 and Cumby and van Wijnbergen, 1988). Turkey still experiences the period which Sachs (1987) describes as the stage in which policy appears to be working. Although the market understands that real appreciation can not continue for long, they do not expect an immediate attack on the currency. Thus, capital inflows continue and reserves of the central bank increase. Sachs (1987), among others, warns that this should not be taken as a sign of long-term confidence since failure to correct the underlying fiscal deficit eventually triggers a speculative attack which, in general, ends with the collapse of the exchange rate.[10]

(b) *Exchange rate policy and short-run macroeconomic objectives*

(i) *Exchange rate policy, exports and output growth*

The impressive growth of exports is made possible by a set of factors operating at the same time. Active management of exchange rates has played a central role in Turkey's successful export orientation and has worked through several channels. First, steady real depreciations until late 1988 not only maintained but in effect improved price competitiveness of exports despite high inflation. Second, it was instrumental in increasing production in the export-oriented industries. Recent research into trade liberalization reveals that economic agents do not respond to price signals unless the policy of export orientation is perceived to be credible and sustainable (Rodrik 1989, 1990c). The sharp real depreciations in the early years of the program have served as strong signals of the government's commitment and thus have positively contributed to solving the credibility problem.

Export performance was also influenced by two sets of factors. The first set relates to trade policy and includes tax rebates, export credits, credit subsidies and foreign exchange allocations for duty-free import of intermediate goods.[11] Furthermore, the import regime was significantly liberalized to reduce the cost of intermediate inputs. The second set of factors consists of historical and political developments. First, an industrial capacity was inherited from the earlier import substitution period and the austerity program in the early 1980s depressed domestic demand, making exports the only way out for existing industries. Second, the ban on layoffs by the military regime turned labor into a fixed factor, making marginal costs flat so that increases in marginal revenues via real depreciations were sufficient for higher supply. Finally, the government was actively involved in arranging bilateral trade agreements.[12]

A quantitative assessment of the role of the exchange rate policy in the export growth is complicated by the simultaneous presence of these diverse factors. Existing empirical studies surprisingly point out that the exchange rate policy has positively contributed to export growth. Celasun and Rodrik (forthcoming) and Rodrick (1988) find that about 35–40% of the increase in exports is due to the exchange rate policy. On the other hand Aricanli and Rodrik (1990b) point out the importance of subsidies for export performance.

The contribution of the exchange rate policy to output growth works through its impact on net exports. Table 1 indicates that until 1985–86 output growth was led by exports. After 1986 strong domestic demand has either compensated for the slowing down of net exports or supplemented its recovery. Hence, output growth has been achieved with a combination of domestic absorption and export growth where the latter is accounted for by exchange rate policy as well as by other export promotion measures.

(ii) *Exchange rate policy and inflation*

Earlier analyses of inflation emphasize demand and supply factors. First, currency depreciations put an upward pressure on inflation by inducing a backward shift in the aggregate supply. Van Wijnbergen (1986) provides a comprehensive analysis of this phenomenon where he emphasizes the role of intermediate inputs, real wage indexation, and the cost of financial capital. Second, a policy of real depreciation interferes with demand management and may lead to a loss of control over the inflationary process: depreciating currency in line with infla-

tion causes the economy to lose one of its nominal anchors, the nominal exchange rate. If, in addition, monetary policy accommodates increases in demand then no nominal anchor is left (Adams and Gros, 1986). In addition, Asikoglu and Uctum (1990) argue that, in a strategic set-up attempts of firms to preserve their relative prices establish a link between prices and exchange rates. The role that these demand and supply factors played in Turkey has been corroborated by several studies. Onis and Ozmucur (1990) find empirical support to the vicious circle explanation of the inflation in Turkey according to which changes in the exchange rate are translated into domestic prices and back to the exchange rate.

While the demand and supply factors help explain the changes in the inflation rate, they cannot account for the persistence of high inflation. Sustained inflation could be related to continual nominal depreciations and/or continual monetary growth. Yet, these explanations should also provide an answer to the question of what makes the policy makers follow such policies initially. The public finance approach relates the persistence of inflation to public sector deficits.[13]

The framework of the public finance approach has recently been applied to the case of Turkey in a series of papers by van Wijnbergen *et al.*[14] Anand and van Wijnbergen (1988) demonstrate that, as inflation rises from 15% to 60%, total revenue from monetization goes from 1.4% of GNP to 2.8%.[15] On the other hand, public sector can raise about 3% of GNP from issuing domestic and external debt subject to the constraints of sustainability and creditworthiness. Hence, the financeable deficit ranges from 4.4% of GNP to 5.8% for inflation of 15–60%. Actual deficit in 1986 is found to be compatible with a sustained inflation of 55%, and lowering inflation to 20% required a deficit reduction of 1.2% of GNP. The actual deficit has increased substantially since 1986 (see Table 1), making the required deficit reduction commensurately larger. Alternatively, the equilibrium inflation rate corresponding to the current fiscal stance has increased.[16]

While the numerical results of this framework depend upon the model's specification and the maintained hypotheses, its central message is robust: the public finance approach provides an explanation for the persistence of high inflation in Turkey, and reducing inflation to the target range of the government (20%) requires a sharp decline in the public sector borrowing requirements, which exceeded 9% of GNP last year.

The public finance approach also highlights a tradeoff between the exchange rate policy and the sustainable inflation rate in the presence of sizeable external debt. The exact nature of the tradeoff depends on the specification of the target for external borrowing. If the target is to maintain the debt-output ratio at a particular level, capital losses associated with real depreciations call for further deficit reduction. According to van Wijnbergen (1990), the required deficit reduction to achieve 20% inflation under the assumption of constant real exchange rate escalates to 3.1% and 4.9% of GNP with 5% and 10% real depreciation, respectively. If the required deficit reduction can not be achieved, the equilibrium inflation becomes commensurately higher.[17]

A complete analysis of inflation in Turkey should utilize both the public finance approach and the demand-supply framework, where the former explains the persistence of the equilibrium inflation and the latter accounts for the cyclical fluctuations of inflation around its sustainable rate. Rodrik (1990b) and OECD (1991) demonstrate that as much as 70% of inflation can be explained by the public finance approach, indicating that other factors, including the direct demand-supply effects of exchange rate fluctuations account for the remaining. Persistence of inflation in the past two years, despite sizeable real appreciation, reveals that the impact of budget deficits overshadows the effects of exchange rates and other factors.

(c) *Exchange rate policy and resource allocation*

One of the principal objectives of the liberalization program is to bring a lasting solution to the chronic balance of payments problem through shifting the productive capacity of the economy into and the expenditure out of the tradables sector. In the short run this requires the output level of tradables to expand relative to that of nontradables. On the other hand, maintaining the export-led growth in the longer run calls for increased fixed capital formation in the traded goods sector. In this section we analyze the extent to which the intended intersectoral resource allocation has been achieved.

Figure 3 displays evolution of the production of traded goods relative to that of nontraded goods.[18] The ratio of the traded goods production to nontradables followed a downward trend during 1974–79, steadily increased thereafter and reached its peak in 1986. In the next three years, the tradables either stagnated or declined relative to nontradables but their growth resumed in 1990. Although the average relative size of the traded goods sector in the postliberalization period (48.80%) is approximately equal to its

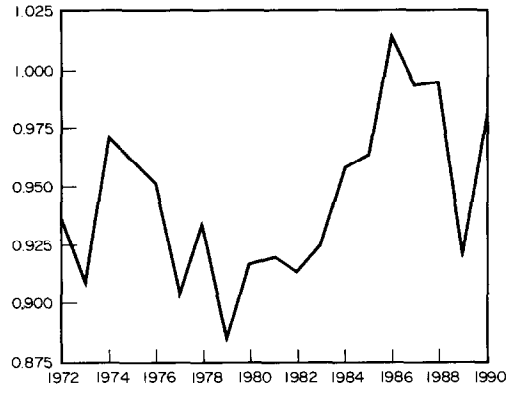


Figure 3. *The ratio of traded to nontraded goods production.*

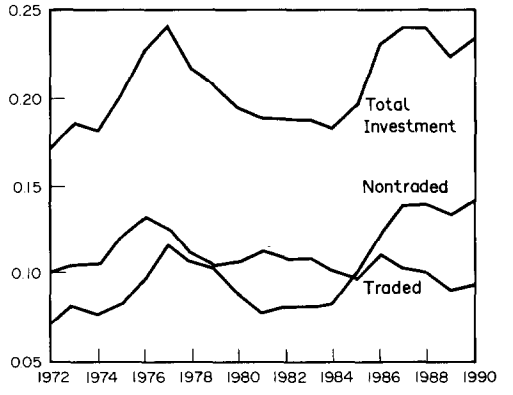


Figure 4. *Total investment and investment in traded and nontraded goods sectors as percentage of GNP.*

value during 1972–79 (48.22%), exchange rate policy should be credited for its contribution to reverting the relative contraction of the traded goods that was set in motion in the late 1970s (see Table 3). Examination of the evolution and composition of fixed capital formation, however, casts doubt over the durability of the export-led growth.

Total investment as a percentage of GNP peaked in 1976 and continuously fell thereafter until 1984. Although the rate of decline slowed down during 1980–84, the investment rate did not pick up before 1985 (see Figure 4). The investment/GNP ratio in the postliberalization period (21.03%) is slightly above its pre-1980 value (20.46%) (see Table 3). The behavior of aggregate investment conceals more than it reveals for two reasons. First, what is more important is its breakdown into investment in traded and nontraded goods sectors. Second, a prominent characteristic of the Turkish economy is the significant role of the public sector in economic activity, particularly in fixed capital formation. As the liberalization program aimed at achieving an outward-looking transformation based primarily on market forces, private fixed

Table 3. *Indicators of intersectoral resource allocation**

	Sample averages		
	Entire sample 1972–90 (%)	Prereform 1972–79 (%)	Postreform 1980–90 (%)
GDP_T/GDP	48.56	48.22	48.80
GDP_N/GDP	51.44	51.78	51.20
INV/GNP	20.79	20.46	21.03
INV_T/GNP	10.70	11.30	10.26
INV_N/GNP	10.09	9.16	10.77
INV_T/INV	51.98	55.41	49.49
Private Sector			
INV_T/INV^{PR}	43.72	46.95	41.36
INV_N/INV^{PR}	56.28	53.05	58.64
Public Sector			
INV_T/INV^{PU}	59.43	64.64	55.64
INV_N/INV^{PU}	40.57	35.36	44.36

Source: Authors' calculations based on the GDP and investment data by State Planning Organization and State Institute of Statistics. GNP figures are taken from State Planning Organization (various issues).

*The subscripts T and N stand for the traded goods sector and the nontraded goods sector, respectively. The superscripts PR and PU denote private and public sector, respectively.

capital formation in the traded goods producing industries should be the investment category to be used in evaluating the post-1980 period.

The ratio of the private sector's investment in the traded goods sector to private investment in nontradables either stagnated or fell in the post-1980 period, but it showed signs of recovery in 1990.[19] The corresponding ratio for the public sector also declined almost continuously, reflecting the intention of the public sector to withdraw from the traded goods industries in order to create room for private sector's expansion. The latter however, could not fill the gap and total capital accumulation in traded goods (relative to nontradables) exhibited a secular decline despite some cyclical changes in its private-public breakdown (see Figure 5).

In terms of sample averages, the shares of both the private and public sector's traded goods investment in their sectoral totals fell: from 46.95% and 64.64% during 1972–79 to 41.36% and 55.64% during 1980–90, respectively (see Table 3). Consequently, the relative weight of investment in traded goods declined after 1980 by all criteria. For example, the share of total traded goods investment in total investment fell from 55.41% to 40.49%; its share in GNP declined from 11.30% to 10.26% (see Table 4 and Figure 4).

The counterpart of fixed capital formation in traded goods is investment in nontradables. Private and public investment in the nontraded goods sector rose steadily after 1980, and led to a continual increase of the share of total nontraded goods investment in GNP and in total investment. Thus, the recovery of total investment is accounted for by capital accumulation in nontradables, instead of tradables (see Table 3 and Figure 4).

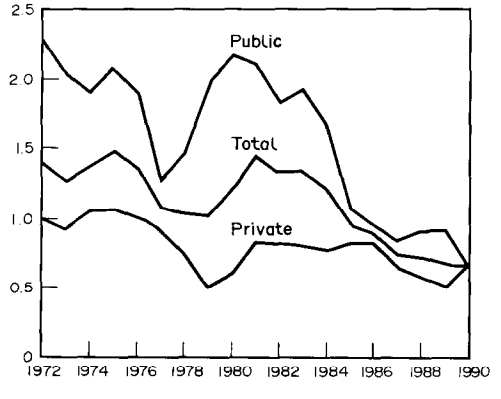


Figure 5. *Ratios of trade and nontraded investment by private and total sectors.*

Taken together, the analysis of output and investment indicates that Turkey has had a mixed record in terms of resource allocation. While the short-run supply response in the form of reorientation of production is achieved, the long-run supply response in the form of increased capital formation in the tradables sector has not been forthcoming.

Investment involves committing capital which is partially irreversible and thus it is critically related to the sustainability of the policy environment (Rodrik, 1989, 1990a). Two components of the sustainable policy environment deserve emphasis: (i) a credible and predictable set of microeconomic incentives, and (ii) a stable macroeconomic environment with low inflation, small budget deficits and low interest rates. Exchange rate policy followed until late 1988 conveyed the authorities' strong commitment to outward orientation. Yet export subsidies, import duties and other components of the trade reform have been subject to frequent and unpredictable changes. Therefore, the entire set of microeconomic incentives might have sent shifting and at times contradictory signals with adverse effects on investment decisions.

The negative role of macroeconomic instability in the weak investment performance is corroborated by Conway (1988 and 1990). His results suggest that investment is a negative function of both levels and variability of interest rates, inflation and exchange rate depreciation. Furthermore, the depressing effect of depreciations is more pronounced in the manufacturing and nonhousing investment categories which largely correspond to our measure of investment in tradables. Greene and Villanueva (1991) provide further evidence for the adverse effects of inflation and interest rates on investment in their multicountry study including Turkey. Anand Chhibber and van Wijnbergen (1990) concentrate on a different set of factors in their analysis of private investment in Turkey. They incorporate into an accelerator-type model both the cost and availability of credit, capacity utilization rate, and the impact of the public investment in infrastructure. Exchange rate effects are not considered and the analysis is undertaken at the aggregate investment level.

Obviously, investment decisions are influenced from a set of factors including but not limited to exchange rates, inflation, excess capacity, financial policy, public investment policy, and perceived stability of the economic environment. Hence, an answer to the weakness of investment performance must be sought in the consistency of the overall economic policies from the perspective of long-run growth. Notwithstanding the

consistency issue, several points can be made regarding the exchange rate management. Promoting export-led growth by relying on real depreciations and other price incentives seems to have reached its limits as the excess capacity in tradables is largely eliminated by now. But a policy reversal toward real appreciation, as observed lately, is not the right way to proceed with the matter. It is very important not to interpret the recovery of investment in 1990 as a supporting sign for real appreciation. While such a policy helps ease the direct negative effects of currency depreciations, it aggravates the sustainability problem. Real appreciation serves as an investment subsidy because of the import content of capital goods. Thus, a period of real appreciation with an anticipation of real depreciation creates an investment boom. Yet, this boom is reversed once the real depreciation occurs when the policy becomes unsustainable (Dornbusch, 1985).

(d) *Consistency of exchange rate policy with other economic policies*

One of the lessons that emerged from the Southern Cone policy reforms is the need for consistency between exchange rate policy and other macroeconomic policies, and in particular the fiscal policy (Corbo and de Melo, 1987). This follows from pursuing a set of policies simultaneously, which in general have conflicting effects on economic objectives.

The more recent accounts of the need for consistency emphasize the nature of the adjustment required for servicing foreign debt. The policies designed for this purpose should satisfy certain accounting identities and budget constraints. Passing the consistency test is not sufficient for their success, but is necessary for them to be credible. First, national income accounting implies that the current account is identically equal to the sum of private and public sector savings over investment. Therefore, servicing foreign debt involves an external transfer from the domestic economy to foreign creditors and a matching internal adjustment. Hence, policies which are geared toward external account (including exchange rate policy) should be accompanied by a set of mutually consistent policies working on the right-hand side of the identity (including fiscal policy). Second, the government budget constraint should be satisfied. Since the foreign debt of Turkey is mainly the liability of the public sector and foreign exchange is earned mainly by the private sector, higher exports are not sufficient for servicing external debt unless simultaneously an internal transfer takes place from the private sector to the public sector. Failure to coordinate the internal and external adjustments manifests itself in the forms of inflation, debt servicing difficulties or capital flight (Sachs, 1987).

In what follows we discuss the consistency of the exchange rate policy with overall economic policies within the spirit of the framework of public finance approach.[20] Table 2 provides the background for our discussion. The early years of the liberalization program is characterized by steep real depreciations, restrictive fiscal policy, and financial liberalization, which constituted a consistent set of policies. Public sector borrowing requirements were reduced and higher revenues from monetization were obtained due to financial liberalization, which significantly increased the demand for base money. Moreover, increased savings due to the positive real interest rate policy, depressed investment demand, and fiscal entrenchment made possible the current account improvement in line with the national income identity.

Consistency of economic policies more or less continued until 1986 but was significantly lost thereafter. Moderately expansionary fiscal policy was loosened up and financial liberalization started to conflict with fiscal balances. The increased government deficits began to be financed at high real interest rates. In addition, financial sector reform and relaxation of foreign exchange regulations lowered the demand for monetary base and hence the revenue from monetization (Anand and van Wijnbergen, 1988; Rodrik, 1990b). Trade liberalization eliminated some of the government revenues and real depreciations increased the domestic currency cost of servicing foreign debt. While the exchange rate based export promotion, and financial and trade liberalization were steps in the right direction, they all required additional fiscal discipline. Failure to substitute the lost revenues with noninflationary methods of financing rendered the over all economic policies inconsistent with each other, leading to acceleration of inflation after 1986. A prominent feature of the Turkish liberalization is that generous amounts of external finance were received in the initial years of the program and Turkey did not transfer net resources abroad in significant magnitudes before 1985. These made the need for fiscal consolidation less urgent, yet the inflationary consequences of high budget deficits began to be increasingly felt when Turkey started to affect net transfers abroad. It should also be noted that the current account performance was satisfactory until very recently despite deterioration of

budget deficits. This was due to private sector's surplus of savings over investment, which in turn was made possible by high real interest rates.

5. CONCLUSION

The objective of this paper was to critically evaluate the exchange rate policy followed since 1980. The policy of persistent real depreciation until late 1988 has been an essential component of the high growth strategy Turkey adopted in solving its debt problem. The impressive growth of exports, outward orientation of the Turkish economy, and expansion of production in tradables relative to nontradables are the accomplishments of the postliberalization period for which the exchange rate policy should be credited for.

The new exchange rate policy as well as trade and financial liberalization policies deployed more or less simultaneously all required additional fiscal discipline. Yet, the fiscal requirements of these desirable reforms were not fully met, partly because substantial foreign aid made the costly fiscal adjustment less urgent. The inconsistency of the underlying fiscal policy with the exchange rate policy and other areas of liberalization program became increasingly obvious in the second half of the 1980s when Turkey started to transfer net income abroad. Although continual real depreciations have had direct and indirect contributions to high inflation, the root cause of the persistent inflation has been fiscal deficits and their inconsistency with the exchange rate policy and other facades of economic management.

Despite the achievements in the sectoral composition of production, the longer run supply response in the form of capacity increase in tradables has been missing so far. Private sector investment has been not only weak but also oriented toward nontradables. The growth of investment has been maintained by and large through public sector investment programs, mainly in nontradables. Symptoms of inconsistent policies, inflation and high real interest rates, and the absence of an investment policy lie at the heart of the problem.

More than 10 years after the launching of the new exchange rate policy, the time has come to take stock of these achievements and weaknesses. It should be recognized that the success of the 1980s cannot be repeated in the 1990s by relying solely on the price effects of real exchange rate changes. As the excess capacity in nontradables is largely eliminated, the future of the export-led growth depends on invigoration of investment in nontradables. For this purpose, restoring policy consistency should receive the top priority and the correcting action should come from the fiscal side of the problem. A well-designed investment policy should supplement the new phase of exchange rate management. The primary task of the exchange rate policy should be to send credible and sustainable signals for continued outward orientation. This can be best achieved by (a) preventing real appreciations and overvaluations, and (b) maintaining internal consistency of economic policies, including the investment policy.

Instead of undertaking the adjustment program outlined above, the authorities seemed to have yielded to the persistence of inflation. Real appreciations tolerated in the last two years, and the increased reliance on domestic and international market mechanisms in exchange rate determination in the midst of an unstable policy environment casts doubt over the determination and ability of Turkish authorities not to repeat the mistakes of the Southern Cone countries, which they skillfully avoided until very recently.

NOTES

1. See Kopits (1987), and the collection of papers in Nas and Odekon (1988), and Aricanli and Rodrik (1990a) for comprehensive reviews of economic policies implemented since 1980.

2. For exchange rate policies in the Southern Cone economies see Dornbusch (1982, 1985), Corbo and de Melo (1987), Dornbusch and Helmers (1988), and Edwards (1989). Several aspects of exchange rate policy in Turkey can be found in Baysan and Blitzer (1990), and Rodrik (1990b, 1990c). Onis and Ozmucur (1990) investigate the relationship between exchange rate depreciations and inflation.

3. As part of the liberalization program the complex system of multiple exchange rates, which led to parallel foreign exchange markets and contained anti-export biases, was phased out by 1982. Furthermore, commercial banks were allowed to undertake foreign exchange operations, open foreign currency deposit accounts, and to buy and sell foreign exchange at the rate that they set within a band around the Central Bank rate. Foreign banks were authorized to open branches in Turkey. In addition, surrender requirements on export earnings were reduced. Several other measures to further liberalize capital movements were undertaken in 1988 and 1989 as discussed below.

4. See Kopits (1987), among others, for such a characterization. For detailed discussions of crawling peg see Williamson (1982) and Wickham (1985).

5. At the end of each business day the Central Bank announces the official exchange rate based on the bid

and asked prices offered by the market participants. This rate is applied, within the officially set margins, to next day's transactions up to $3,000. For larger transactions, exchange rates are freely negotiable between authorized parties. This transaction limit was originally $50,000, and was later reduced first to $10,000 and then to $3,000 in August 1990. See Central Bank (1990) for further details of the new exchange rate determination mechanism.

6. We use the Real Effective Exchange Rate index provided by the Central Bank of Turkey. Definition of this index is a source of confusion in the literature. Commonly, the real rates relative to a basket of currencies, such as the Central Bank's index, are referred to as real effective exchange rates. Such measures should be called the real multilateral exchange rates and the term real effective exchange rate should be used for the measures which incorporate trade taxes and subsidies into the analysis. Due to data limitations we have been unable to compute such series for the entire period of our analysis. Therefore, we base our discussion on the series of the Central Bank of Turkey but refer to it as the real exchange rate, RER, to avoid confusion in terminology. (See Edwards, 1989 for a similar treatment of the problem.)

7. For discussions of the *tablita* experiment see Corbo and de Melo (1987), and Dornbusch (1982, 1985).

8. Technical aspects, however, of real appreciation in Turkey differs from the Latin American example. Turkish authorities were not locked into a timetable, and thus were free to affect the rate of change of the exchange rate once it became obvious that inflation could not be lowered.

9. For a detailed discussion of the effects of real appreciation on domestic demand, see Dornbusch (1985).

10. Since the beginning of 1991, the nominal exchange rate of the lira depreciated sharply. The Central Bank intervened several times and lost reserves in due process. These developments coincided with the political problems in the Persian Gulf. It is too early to properly interpret these developments. Hence, our analysis applies to the period until the end of 1990.

11. Milanovic (1986) and Baysan and Blitzer (1990) find that in the first half of the 1980s the average value of these subsidies amounted to about 20%.

12. For comprehensive reviews of export-promotion policies and Turkey's trade liberalization, see Baysan and Blitzer (1990), and Senses (1989, 1990).

13. For earlier work in this approach see Phelps (1973). This approach has been extended to the open economy by Drazen and Helpman (1987), and van Wijnbergen (1987).

14. For the application of this framework to Turkey, see Anand and van Wijnbergen (1988 and 1989), van Wijnbergen (1990), and Anand, Chhibber and van Wijnbergn (1990). Rodrik (1990b) presents a simplified version of this framework. The public finance approach is utilized by the OECD (1990, 1991) to analyze the persistence of inflation in Turkey.

15. Total revenue from monetization is the sum of inflation tax and seignorage. The former refers to accumulation of nominal balances at the rate of inflation to keep real money balances constant. Seignorage is the increase in the real money balances which is proportional to output growth in the steady state. The appropriate concept of money is the base money.

16. See also van Wijnbergen (1990). Anand and van Wijnbergen (1989) discuss the same issue under a different numerical scenario.

17. The two other possibilities are maintaining a constant debt-exports ratio or a weighted average of debt-exports and debt-output ratios. Anand and van Wijnbergen (1988) demonstrate that under a specific weighting scheme the tradeoff between real depreciation and inflation disappears.

18. Our calculations of the GDP produced in the traded and nontraded goods sectors are based on the GDP data published by the State Planning Organization and the State Institute of Statistics. We aggregate industry (manufacturing, mining and energy) and agriculture into the traded goods sector. The nontraded goods sector is composed of wholesale and retail trade; private professions and services; government, health and education; ownership of dwellings; financial institutions; and transport and communications.

19. Our calculations of investment in traded and nontraded goods sectors are based on the investment data published by the State Planning Organization. Traded goods investment is composed of investment in agriculture, mining and quarrying, manufacturing, energy, and tourism. Nontraded goods investment consists of investment in housing, education, health, transportation and communication, and other investment.

20. Checking for consistency involves the following steps. First, creditworthiness of the country determines the feasible current account deficit which, among other variables, is a function of the domestic growth rate. Given the sustainable external borrowing, the second step is to set up the matching program of internal adjustment as implied by the national income identity. The extent to which the public sector contributes to the internal adjustment is determined by the sustainable budget deficit. The previous steps determine the contribution of the private sector's saving-investment surplus to the internal adjustment. This surplus should be generated in such a way that the actual growth rate coincides with the one used to determine the feasible current account in the beginning of the analysis. See van Wijnbergen (1990), and Anand, Chhibber and van Wijnbergen (1990) for further detail.

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