

Characteristics of Prolonged Users: Further Details on the Evidence

This annex provides more details of the analyses discussed in Chapter 4.

Econometric Evidence on the Characteristics of Prolonged Users

We estimated a series of probit regressions to examine whether prolonged users had economic and institutional characteristics that were different from “temporary” users. The characteristics considered, which were drawn from the recent empirical literature on participation in IMF arrangements,¹ were (i) per capita GDP; (ii) real GDP growth; (iii) current account balance (in relation to GDP); (iv) international reserves (in months of imports); (v) debt-service ratio (measured in relation to exports); (vi) openness of the economy (measured as the ratio of the sum of exports and imports to GDP); (vii) primary exports (as a share of total exports); and (viii) volatility in the terms of trade (standard deviation of the terms of trade index).

Two definitions of “prolonged use” were employed in these exercises—one “fixed” over time, and the other “dynamic” (i.e., time-specific).² Using the fixed definition, which classified a country as a prolonged user if it had IMF arrangements in 7 out of any 10-year period during 1971–2000, and entire sample period average data, we found prolonged use to be associated with lower levels of international reserves, with higher debt-service ratios, and with lower real GDP growth. There was no statistically significant difference between prolonged and “tem-

porary” users with respect to the other characteristics considered (column 1 in Annex Table 3.1).³ When the sample was limited to PRGF-eligible countries only, prolonged use was found to be associated with higher debt-service ratios and lower GDP per capita (column 2 in Annex Table 3.1).⁴

For countries not eligible for the PRGF (i.e., middle- and high-income users of IMF resources), we found no statistically significant differences between prolonged users and “temporary” users for any of the variables (column 3 in Annex Table 3.1).

Introduction of an institutional variable—quality of government bureaucracy⁵—suggested that prolonged use was associated with lower quality of government bureaucracy, and that once this factor was taken into account, the differences in economic characteristics (i.e., growth, international reserves, and debt-service ratio) were no longer significantly different between prolonged and “temporary” users (column 4 in Annex Table 3.1).

³The list of distinguishing characteristics here is much shorter than that reported in Bird, Hussain, and Joyce (2000), in which the authors found that repeated participation in programs (“recidivism”) was associated with: (i) lower levels of international reserves; (ii) larger current account deficits; (iii) lower and less volatile terms of trade; (iv) larger debt-service ratios; (v) larger capital outflows; (vi) lower per capita income; (vii) lower investment rates; and (viii) weaker governance. Differences in methodology may account for the different results. Bird, Hussain, and Joyce do not predefine a threshold for “recidivism”; rather they regress the number of arrangements and the number of program years on a range of variables using Poisson and negative binomial models.

⁴These estimates do not take account of the likely strong endogeneity between growth and the likelihood that a country will request an IMF arrangement—for example, because exogenous shocks that worsen the balance of payments also harm growth. In Annex 4, when this endogeneity is taken into account, the negative association between growth on prolonged use disappears for PRGF-eligible countries.

⁵The institutional variable used is the “Bureaucracy quality” index calculated by the International Country Risk Guide. It is designed to provide an indication of the policy environment, especially the extent to which policy formulation and day-to-day administrative functions are able to withstand political changes.

¹See, for example, Bird, Hussain, and Joyce (2000); Joyce (2001); and Barro and Lee (2002).

²Due to data limitations for several users of IMF resources during the period covered by the evaluation (1971–2000), a maximum of only 83 countries were covered in the regressions. Also, because data for 1971–75 and for 2000 were missing for many variables for many countries, the annual time series data used spanned 1976–99. Among users of IMF resources that were excluded were countries that either did not exist in 1976 or had missing data for several variables during most of 1976–99.

Annex Table 3.1. Characteristics of Prolonged Users of IMF Resources¹

Marginal probabilities	Fixed definition sample averages				Dynamic definition five-year averages			
	All (1)	PRGF (2)	non-PRGF (3)	All (4)	All (5)	PRGF (6)	non-PRGF (7)	All (8)
GDP per capita	-0.048 (1.09)	-0.545 (1.73)*	-0.039 (0.66)	0.014 (0.26)	0.012 (0.08)	1.184 (1.47)	-0.057 (0.33)	-0.078 (0.31)
Real GDP growth	-0.058 (1.72)*	-0.020 (0.42)	-0.077 (1.45)	-0.031 (0.84)	-0.020 (1.29)	-0.039 (1.33)	-0.021 (0.95)	-0.025 (0.93)
Current account balance	0.006 (0.45)	0.024 (1.29)	-0.028 (0.71)	0.013 (0.77)	-0.008 (0.93)	-0.021 (1.50)	-0.020 (1.35)	-0.045 (2.19)**
Foreign reserves	-0.070 (1.80)*	-0.084 (1.43)	-0.025 (0.42)	-0.063 (1.50)	0.056 (2.07)**	0.136 (2.75)***	-0.004 (0.10)	0.072 (1.44)
Debt-service ratio	0.015 (2.16)**	0.024 (2.10)**	-0.000 (0.03)	0.011 (1.28)	-0.004 (0.96)	-0.006 (0.72)	-0.008 (1.56)	-0.003 (0.35)
Openness	-0.001 (0.34)	0.005 (1.20)	-0.006 (1.28)	0.002 (0.76)	0.001 (0.40)	-0.003 (0.57)	0.007 (1.42)	0.008 (1.53)
Primary exports	-0.001 (0.42)	0.001 (0.20)	-0.007 (1.23)	-0.001 (0.34)	0.003 (0.63)	-0.003 (0.43)	0.008 (1.36)	0.008 (1.09)
Term of trade volatility	-0.004 (0.72)	-0.005 (0.70)	-0.006 (0.30)	-0.003 (0.66)	-0.009 (1.44)	-0.008 (0.84)	-0.015 (1.54)	0.005 (0.40)
Lagged GDP per capita					-0.000 (0.25)	-0.002 (1.83)*	0.000 (0.50)	0.000 (0.48)
Lagged real GDP growth					-0.015 (1.10)	-0.040 (1.75)*	0.000 (0.02)	0.025 (1.05)
Lagged current account balance					-0.020 (2.07)**	0.002 (0.18)	-0.064 (3.58)***	-0.076 (3.36)**
Lagged foreign reserves					-0.070 (2.57)**	-0.153 (2.79)***	-0.031 (0.98)	-0.146 (2.54)**
Lagged debt-service ratio					0.012 (2.91)***	0.018 (2.18)**	0.010 (2.20)**	0.015 (2.25)**
Lagged openness					-0.003 (0.81)	0.004 (0.72)	-0.010 (1.96)*	-0.008 (1.41)
Lagged primary exports					-0.002 (0.43)	0.006 (0.87)	-0.009 (1.40)	-0.008 (0.98)
Lagged terms of trade volatility					-0.000 (0.08)	-0.001 (0.26)	0.001 (0.22)	-0.004 (0.54)
Bureaucracy quality				-0.231 (2.06)**				-0.077 (1.03)
Observations	83	48	35	65	218	105	113	124
Pseudo R-squared	0.14	0.26	0.18	0.13	0.18	0.32	0.29	0.32
p-value	0.0378	0.0302	0.3642	0.2603	0.0000	0.0001	0.0011	0.0000

Sources: IMF, WEO and MONA databases; ICGR database; and IEO calculations

¹Bold numbers indicate that the coefficient on the variable is statistically different from zero at the following significance level: 10 percent (*), 5 percent (**), and 1 percent (***).

In order to allow for some dynamics, a second set of exercises used a period-specific definition of “prolonged use,” based on five-year average panel data (columns 5–8 in Annex Table 3.1). A country was defined to be a prolonged user in a particular five-year period if it had IMF arrangements in seven or more years during that and the preceding five-year period. Prolonged use was found to be strongly associated with (i) lower international reserves in the

preceding five-year period but higher reserves in the current five-year period; (ii) lower current account balances in the preceding five-year period; and (iii) higher debt service in the preceding five-year period. No statistically significant difference was found in the quality of bureaucracy.

When the sample was limited to only PRGF-eligible countries, prolonged use was again associated with lower levels of reserves in the previous period

Annex Table 3.2. Comparison of Starting Conditions for Groups of Prolonged and “Temporary” Users*(In percent of GDP, unless otherwise indicated)*

	Public debt	External debt	Current account balance	Overall budget balance	Inflation (in percent)
1976–79					
Prolonged users	31.9	37.7	–6.6	–6.7	23.7
“Temporary” users	58.9	15.2	–3.8	–6.0	19.0
Statistical significance	ns	**	ns	ns	ns
1988–91					
Prolonged users	116.1	157.1	–4.8	–10.1	9.8
“Temporary” users	45.3	57.1	–2.8	–5.3	24.5
Statistical significance	ns	*	ns	ns	ns

Sources: IMF, WEO database; and IEO calculations.

Note: ** and * indicate statistical significance at the 1 percent and 10 percent levels, respectively; ns indicates no significance.

but higher levels in the current period; and with higher debt-service ratios in the preceding period. Prolonged use was also associated with lower GDP growth for this group of countries. For countries not eligible for the PRGF, taking account of both contemporaneous and lagged effects, prolonged use was found to be associated with larger current account deficits, larger debt-service ratios, and less open economies.

Cross-Section Evidence on Comparison Between Prolonged and “Temporary” Users

Starting conditions

To compare the “starting conditions” of prolonged users at the beginning of their episode of prolonged use with those of contemporaneous “temporary” users, we identified two subperiods (1976–79 and 1988–91) during which a large proportion of the episodes of prolonged use that we studied were initiated and looked at economic conditions in the three years preceding the first program of the prolonged use series for the two groups of prolonged users thus identified. We then identified two control groups of “temporary” users, consisting of all the countries that entered into an IMF arrangement during the same periods. Starting conditions were appraised by looking at five measures of potential macro imbalances: public debt, external debt, current account balance, overall fiscal balance, and inflation. The results of the comparison are shown in Annex Table 3.2.

Economic performance and macroeconomic adjustment⁶

As regards GDP growth, a comparison between prolonged and “temporary” users of IMF resources over the last three decades suggests that, in most periods, prolonged users grew at a slower pace than “temporary” users, the exceptions being the early 1970s and early 1990s for middle-income countries (i.e., the times when there were few debt crises) and the 1990s for low-income countries (Annex Figure 3.1).

Export growth was generally much weaker, on average, in the group of prolonged users than in the “temporary users” group as far as low-income countries are concerned. For middle-income countries, the opposite was generally true, but differences were less pronounced (Annex Figure 3.2).⁷

The analysis of adjustment performance, as measured by trends in inflation and reductions in current account deficits, does not show any clear or consistent differences between the two groups, although

⁶See Annex Table 3.3 for detailed figures and statistical significance of the comparisons. In the results presented here, the groups “prolonged users” and “temporary users” are both fixed populations (the former group consisting of the countries listed in Chapter 2), that is, we are looking at the characteristics of a broad group of countries that, at some point in the overall period encountered episodes of prolonged use against other countries which, at some point in the same period, entered into an IMF-supported program, but which did not become prolonged users. However, because the population of prolonged users does not change much over time, the results would not be substantially altered if a “dynamic” definition of prolonged use were used.

⁷These results are statistically significant only for the PRGF-eligible group over the 1980s.

Annex Table 3.3. Comparison of Prolonged and “Temporary” Users¹*(In percent, unless otherwise specified)*

ECONOMIC PERFORMANCE									
	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	1971–80	1981–90	1991–2000
GDP growth	(Period geometric mean)								
PRGF-eligible users									
Prolonged	3.0	3.2	0.7	2.3	1.6	5.5	3.1	1.5	3.5
Temporary	3.3	2.7	3.2	2.8	0.5	3.9	3.2	3.0	1.7
<i>t</i> test significance ¹	ns	ns	**	ns	ns	ns	ns	*	ns
Non-PRGF-eligible users									
Prolonged	6.3	4.7	2.0	2.4	2.3	2.2	5.0	2.2	2.2
Temporary	5.5	5.1	2.2	2.7	1.0	3.0	5.2	2.7	1.6
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	3.2	6.2	6.8	5.8	4.8	2.8	4.7	6.3	3.9
Philippines	5.8	6.1	–1.3	4.7	2.2	3.3	5.9	1.7	2.7
Senegal	2.4	1.0	3.0	3.2	1.5	5.3	1.7	3.1	3.2
Per capita GDP growth									
PRGF-eligible users									
Prolonged	0.5	0.4	–1.4	0.0	–0.9	2.7	0.4	–0.7	0.7
Temporary	2.3	1.9	–0.3	0.6	–2.7	1.5	2.1	–0.2	–0.6
<i>t</i> test significance	**	*	ns	ns	ns	ns	**	ns	ns
Non-PRGF-eligible users									
Prolonged	3.1	2.2	–0.5	1.3	0.9	1.2	2.6	0.4	1.1
Temporary	4.1	2.9	1.0	2.3	–0.3	2.1	3.4	1.7	1.1
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	0.0	4.2	3.5	3.4	2.2	0.6	1.5	3.5	1.4
Philippines	2.9	1.9	–3.5	0.8	–0.1	1.5	3.1	–0.7	0.7
Senegal	–0.6	–0.3	–0.8	–0.7	–1.0	2.5	–1.2	0.3	0.7
Inflation									
PRGF-eligible users									
Prolonged	12.0	19.2	55.2	167.7	158.0	77.1	15.3	64.5	15.7
Temporary	10.7	11.1	13.2	13.6	18.6	33.4	10.7	14.1	23.3
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	19.5	18.9	27.8	55.1	77.6	48.3	21.1	32.1	22.4
Temporary	19.5	17.2	23.0	42.8	58.4	47.3	18.3	26.4	18.6
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	15.7	8.8	5.2	9.4	11.2	7.3	12.2	7.0	9.2
Philippines	17.0	12.9	14.3	12.7	10.0	7.1	14.7	13.0	8.5
Senegal	13.5	8.9	7.5	–0.6	6.8	1.4	10.1	5.8	4.1
Growth of exports									
PRGF-eligible users									
Prolonged	3.2	5.7	–1.3	2.9	4.6	7.4	4.4	1.4	6.2
Temporary	4.9	4.7	2.4	4.6	4.1	9.1	4.3	3.2	4.4
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	8.3	7.3	4.2	5.5	7.2	6.8	7.7	4.8	7.0
Temporary	5.1	6.7	3.2	7.1	3.6	4.8	5.1	5.2	4.3
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	–4.0	11.2	12.2	10.8	9.0	0.3	1.6	8.1	4.5
Philippines	4.4	8.6	2.4	7.2	9.4	3.3	9.7	3.6	6.3
Senegal	1.2	–2.7	0.5	1.2	0.8	5.0	–1.4	4.5	2.9

Annex Table 3.3 (continued)

FISCAL CHARACTERISTICS									
	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	1971–80	1981–90	1991–2000
Overall budget deficit (percent of GDP)									
PRGF-eligible users									
Prolonged	–4.0	–6.0	–7.9	–4.5	–4.1	–3.1	–5.2	–6.8	–3.4
Temporary	–3.5	–5.6	–8.1	–6.1	–5.1	–3.8	–4.4	–4.3	–7.2
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	**
Non-PRGF-eligible users									
Prolonged	–3.1	–4.8	–4.5	–2.6	–1.2	–2.2	–4.1	–3.8	–1.5
Temporary	–4.1	–4.2	–5.0	–3.2	–2.7	–1.9	–3.9	–4.0	–2.3
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	–7.6	–8.0	–6.1	–7.3	–7.6	–6.5	–7.9	–6.7	–7.1
Philippines	–1.0	–1.3	–2.9	–3.2	–0.6	–1.3	–1.2	–3.1	–0.9
Senegal	–1.1	–0.7	–5.9	n.a.	n.a.	n.a.	–0.9	–5.9	n.a.
Tax revenues (percent of GDP)									
PRGF-eligible users									
Prolonged	13.8	14.9	16.0	14.3	14.3	14.1	16.1	15.2	15.3
Temporary	20.2	20.5	20.5	13.0	14.6	13.9	20.3	17.6	13.8
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	13.1	15.6	16.3	15.0	18.7	18.7	14.3	16.3	18.5
Temporary	18.4	21.6	24.1	24.0	25.1	25.0	20.2	24.2	24.9
<i>t</i> test significance	**	**	**	**	**	**	**	**	**
Memorandum									
Pakistan	10.3	12.3	10.6	12.4	15.6	16.0	11.4	11.5	15.8
Philippines	15.0	18.7	18.1	n.a.	n.a.	n.a.	16.9	18.1	n.a.
Senegal	11.0	11.8	12.9	13.4	12.7	13.1	11.5	13.1	12.9
Government expenditure (percent of GDP)									
PRGF-eligible users									
Prolonged	21.1	23.8	28.5	23.5	23.2	22.1	21.5	26.0	23.1
Temporary	17.4	23.0	27.5	25.7	25.2	23.2	21.3	26.0	23.9
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	22.9	26.1	25.0	22.5	23.5	24.0	24.1	24.5	23.6
Temporary	25.8	28.6	32.6	31.2	31.4	30.5	27.3	31.6	30.9
<i>t</i> test significance	ns	ns	**	**	**	**	ns	**	**
Memorandum									
Pakistan	16.9	17.4	19.0	23.3	23.6	22.2	17.2	21.2	23.0
Philippines	13.9	13.8	12.0	16.6	18.7	19.1	13.8	14.3	18.9
Senegal	18.2	20.3	27.1	n.a. ²	n.a.	n.a.	19.2	27.1	n.a.
Of which interest (percent of expenditure)									
PRGF-eligible users									
Prolonged	5.1	6.2	10.8	10.0	14.9	16.8	5.2	10.3	14.7
Temporary	3.2	4.1	5.9	8.6	11.8	14.1	3.7	6.6	11.9
<i>t</i> test significance	**	**	**	ns	ns	ns	ns	**	ns
Non-PRGF-eligible users									
Prolonged	4.7	6.3	12.7	15.7	12.2	11.9	5.3	14.9	12.0
Temporary	4.7	5.7	9.6	13.0	11.3	10.3	5.1	11.5	10.9
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	9.8	10.7	14.4	19.9	23.9	29.1	10.4	16.9	26.2
Philippines	3.7	5.6	13.8	32.4	27.2	18.4	4.8	23.1	23.3
Senegal	2.3	6.2	7.5	n.a.	n.a.	n.a.	4.3	7.5	n.a.

Annex Table 3.3 (continued)

FISCAL CHARACTERISTICS (CONTINUED)									
	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	1971–80	1981–90	1991–2000
Of which defense (percent of expenditure)									
PRGF-eligible users									
Prolonged	n.a.	n.a.	n.a.	14.4	10.1	10.5	n.a.	14.5	9.9
Temporary	n.a.	n.a.	n.a.	20.6	16.4	17.1	n.a.	20.5	16.5
<i>t</i> test significance	n.a.	n.a.	n.a.	ns	**	**	n.a.	ns	**
Non-PRGF-eligible users									
Prolonged	n.a.	n.a.	n.a.	18.1	11.2	9.7	n.a.	17.2	11.2
Temporary	n.a.	n.a.	n.a.	10.5	9.3	9.0	n.a.	10.5	9.1
<i>t</i> test significance	n.a.	n.a.	n.a.	**	ns	ns	n.a.	**	ns
Memorandum									
Pakistan	n.a.	n.a.	28.1	27.6	26.6	24.0	n.a.	27.7	25.9
Philippines	n.a.	n.a.	9.5	11.2	10.1	8.4	n.a.	10.9	9.6
Senegal	n.a.	n.a.	8.8	6.6	10.3	8.7	n.a.	7.1	9.8
Public debt stock (percent of GDP)									
PRGF-eligible users									
Prolonged	30.6	46.7	90.2	90.8	92.0	94.9	38.6	86.2	81.9
Temporary	44.4	21.0	47.1	56.0	81.3	95.0	42.4	53.9	84.8
<i>t</i> test significance	ns	**	**	**	ns	ns	ns	**	ns
Non-PRGF-eligible users									
Prolonged	43.4	37.9	45.7	55.2	44.1	40.5	40.5	54.5	42.1
Temporary	29.2	36.1	51.7	48.4	45.4	43.3	32.6	47.6	43.3
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	66.9	56.8	54.4	73.8	76.5	79.1	61.8	64.1	77.2
Philippines	43.5	30.2	29.6	51.9	58.1	60.3	36.8	40.8	58.9
Senegal	13.9	n.a.	60.0	n.a.	n.a.	n.a.	8.0	60.0	n.a.
Public debt service									
PRGF-eligible users									
Prolonged	10.0	14.2	22.6	26.2	22.1	17.0	13.6	24.2	19.8
Temporary	8.1	7.7	15.6	19.3	12.4	12.5	7.7	17.1	12.6
<i>t</i> test significance	ns	**	ns	ns	**	ns	**	**	**
Non-PRGF-eligible users									
Prolonged	5.4	25.1	28.4	26.1	18.6	19.8	24.5	27.3	19.1
Temporary	14.3	15.5	21.9	23.4	14.0	15.5	15.0	22.7	14.8
<i>t</i> test significance	**	**	**	**	**	**	**	**	**
Memorandum									
Pakistan	20.9	19.9	19.4	24.9	26.2	27.9	20.4	22.2	26.9
Philippines	n.a.	23.4	35.5	30.6	21.6	12.2	23.4	33.1	17.4
Senegal	6.2	14.6	15.8	27.7	15.5	18.4	12.2	21.8	16.8
PPG debt service (percent revenue)									
PRGF-eligible users									
Prolonged	14.2	15.5	19.7	23.2	24.6	19.4	14.8	21.0	23.5
Temporary	6.9	6.1	10.6	14.3	15.6	18.4	6.3	12.2	17.3
<i>t</i> test significance	ns	**	**	**	**	**	**	**	**
Non-PRGF-eligible users									
Prolonged	14.8	22.6	32.0	27.5	20.2	22.3	19.1	29.4	21.4
Temporary	8.4	10.3	15.7	23.8	15.5	14.5	9.4	19.2	15.0
<i>t</i> test significance	**	**	**	ns	ns	**	**	**	**
Memorandum									
Pakistan	19.1	15.9	18.0	18.8	23.6	21.3	17.1	18.4	22.6
Philippines	13.0	14.9	28.0	43.2	35.7	30.9	14.1	35.6	33.6
Senegal	10.0	24.1	18.1	n.a.	n.a.	n.a.	17.0	18.1	n.a.

Annex Table 3.3 (continued)

FISCAL CHARACTERISTICS (CONCLUDED)									
	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	1971–80	1981–90	1991–2000
Stock of external debt (percent of GDP)	(Period average)								
PRGF-eligible users									
Prolonged	29.0	31.1	35.6	40.7	46.0	51.9	56.7	63.0	70.2
Temporary	12.4	27.3	45.1	78.3	109.8	98.7	19.9	59.4	111.1
<i>t</i> test significance	**	ns	ns	**	**	**	**	ns	ns
Non-PRGF-eligible users									
Prolonged	28.7	41.7	63.9	78.7	61.7	53.1	35.2	71.3	58.3
Temporary	20.0	28.1	43.0	54.1	47.0	42.5	24.1	49.7	47.6
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	52.2	47.0	40.0	47.8	50.3	51.5	48.5	43.9	50.8
Philippines	29.1	45.3	72.1	79.4	62.5	61.2	37.2	75.8	61.9
Senegal	17.0	36.7	61.0	59.7	66.2	75.4	30.5	70.8	61.2
BALANCE OF PAYMENTS CHARACTERISTICS									
	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	1971–80	1981–90	1991–2000
Current account deficit (percent of GDP)	(Period average)								
PRGF-eligible users									
Prolonged	–4.4	–3.2	–7.4	–5.7	–7.7	–9.0	–3.5	–6.1	–8.3
Temporary	–4.2	–4.5	–7.4	–6.0	–7.9	–9.1	–4.7	–6.4	–8.6
<i>t</i> test significance	ns	**	ns	ns	ns	ns	**	ns	ns
Non-PRGF-eligible users									
Prolonged	–2.8	–3.4	–3.9	–2.3	–2.8	–2.7	–3.4	–2.9	–2.8
Temporary	–4.5	–2.6	–5.6	–1.8	–1.9	–3.0	–2.9	–3.5	–2.3
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	–4.7	–4.6	–2.7	–2.6	–3.6	–4.8	–4.6	–2.6	–4.1
Philippines	n.a.	–5.0	–5.4	–1.7	–3.4	0.7	–5.0	–3.6	–1.6
Senegal	–4.6	–8.3	–13.4	–8.2	–6.4	–4.2	–7.2	–10.8	–5.4
Gross international reserves (months of imports)									
PRGF-eligible users									
Prolonged	4.3	4.7	4.5	4.7	5.8	6.6	4.7	4.7	6.2
Temporary	5.0	3.4	2.6	2.5	2.7	3.4	3.4	2.5	3.1
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	5.5	8.5	7.4	7.8	8.5	8.8	8.5	7.5	8.6
Temporary	4.3	4.7	3.1	3.2	3.3	3.5	4.5	3.2	3.3
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	3.6	2.9	3.0	1.8	2.0	1.3	3.2	2.4	1.7
Philippines	n.a.	4.3	1.7	2.4	3.1	3.2	4.3	2.0	3.1
Senegal	0.3	0.3	0.2	0.2	0.7	2.6	0.3	0.2	1.6
Gross international reserves (billions of U.S. dollars)									
PRGF-eligible users									
Prolonged	0.1	0.2	0.2	0.3	0.7	0.1	0.2	0.3	0.8
Temporary	0.1	0.4	0.8	0.9	1.7	4.8	0.3	0.8	3.0
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	0.6	1.5	1.5	2.5	5.1	4.2	1.0	2.0	7.0
Temporary	0.1	2.4	2.5	2.9	5.7	8.3	1.7	2.7	6.9
<i>t</i> test significance	**	ns	ns	ns	ns	**	ns	ns	ns
Memorandum									
Pakistan	0.5	1.0	1.8	1.3	2.2	0.2	0.7	1.5	1.9
Philippines	1.0	2.5	1.5	2.3	6.1	4.9	1.8	1.9	8.3
Senegal	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

Annex Table 3.3 (concluded)

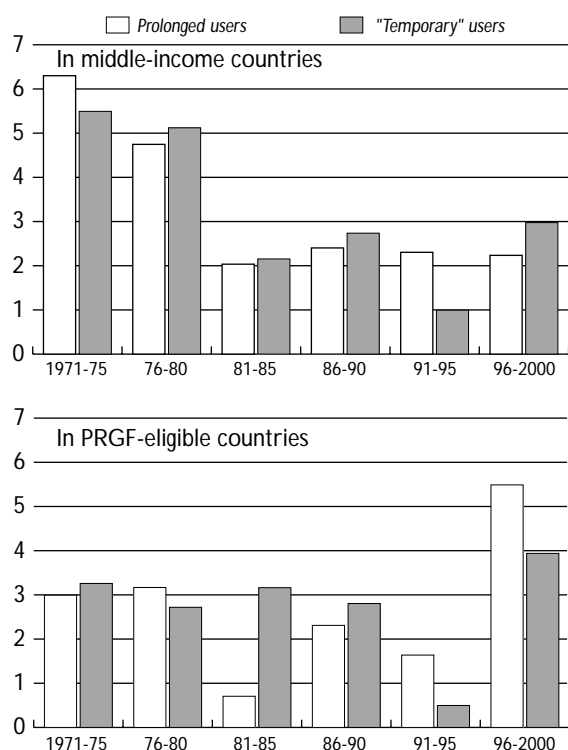
BALANCE OF PAYMENTS CHARACTERISTICS (CONCLUDED)									
	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	1971–80	1981–90	1991–2000
Gross international reserves (percent external debt)	(Period average)								
PRGF-eligible users									
Prolonged	35.9	14.1	6.2	6.0	9.1	11.5	24.8	6.1	10.2
Temporary	103.3	64.0	33.6	20.4	18.2	23.9	84.7	25.2	21.0
<i>t</i> test significance	ns	**	**	**	**	**	**	**	**
Non-PRGF-eligible users									
Prolonged	60.4	33.3	14.7	17.2	28.8	25.4	44.1	15.9	26.3
Temporary	93.6	77.8	30.1	24.7	46.8	39.9	84.7	27.4	43.2
<i>t</i> test significance	ns	ns	**	ns	ns	**	**	**	**
Memorandum									
Pakistan	9.9	11.5	15.1	7.5	8.3	5.6	10.7	11.3	7.0
Philippines	32.8	23.0	6.3	7.9	17.0	25.8	27.9	7.1	21.4
Senegal	11.5	3.9	1.0	0.7	2.8	10.6	7.7	0.8	6.7
Terms of trade									
PRGF-eligible users									
Prolonged	141.7	146.6	119.9	113.0	96.6	105.3	144.1	116.5	100.9
Temporary	137.0	146.9	143.1	134.9	115.4	118.8	142.0	139.0	117.1
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	97.7	105.3	102.1	97.0	97.5	96.9	101.5	99.5	97.5
Temporary	99.5	103.7	106.1	103.6	99.5	100.2	101.6	104.8	99.8
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	**
Memorandum									
Pakistan	132.5	133.6	124.2	120.2	97.1	118.7	133.0	122.2	107.9
Philippines	124.9	96.8	92.8	106.7	105.3	92.0	110.9	99.8	100.5
Senegal	100.6	105.3	103.6	112.7	100.7	100.3	102.9	108.1	100.5
Trade (percent of GDP)									
PRGF-eligible users									
Prolonged	58.6	65.2	60.8	60.1	68.4	73.7	61.5	61.1	70.7
Temporary	41.2	68.3	62.7	60.3	71.9	75.8	65.6	60.6	74.7
<i>t</i> test significance	**	ns	ns	ns	ns	ns	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	48.2	59.8	61.0	60.8	66.4	73.4	58.9	61.9	69.5
Temporary	61.9	72.0	69.9	71.1	80.7	85.2	69.5	70.9	82.7
<i>t</i> test significance	**	**	ns	**	**	**	**	**	**
Memorandum									
Pakistan	29.2	31.2	33.8	35.7	39.0	37.8	30.2	34.7	38.5
Philippines	45.0	47.1	48.5	55.3	70.2	102.4	46.1	51.9	84.5
Senegal	69.5	76.3	79.7	56.1	62.9	72.8	72.9	67.9	67.3
Share of primary exports (percent of merchandise exports)									
PRGF-eligible users									
Prolonged	89.3	88.2	84.5	76.3	76.8	73.7	88.2	83.6	77.7
Temporary	86.5	82.1	76.5	68.0	69.4	59.5	84.8	75.6	67.1
<i>t</i> test significance	ns	ns	ns	ns	ns	**	ns	ns	ns
Non-PRGF-eligible users									
Prolonged	73.1	69.3	66.7	58.2	53.3	49.9	71.2	61.0	51.2
Temporary	72.5	67.8	65.4	56.2	47.8	45.9	69.7	61.5	47.0
<i>t</i> test significance	ns	ns	ns	ns	ns	ns	ns	ns	ns
Memorandum									
Pakistan	44.1	44.8	39.8	29.5	17.6	15.5	44.4	34.6	16.7
Philippines	90.2	81.0	75.5	65.9	52.4	24.5	85.6	70.7	40.0
Senegal	81.9	88.0	87.2	75.9	65.6	49.0	84.6	80.7	58.3

Sources: IMF, WEO, IFS, and GFS databases; and IEO calculations.

¹ns indicates the compared means are not statistically significant, while * and ** indicate statistical significance at 95 percent and 99 percent confidence levels, respectively, according to *t* student test.²n.a. denotes data are not available.

Annex Figure 3.1. GDP Growth

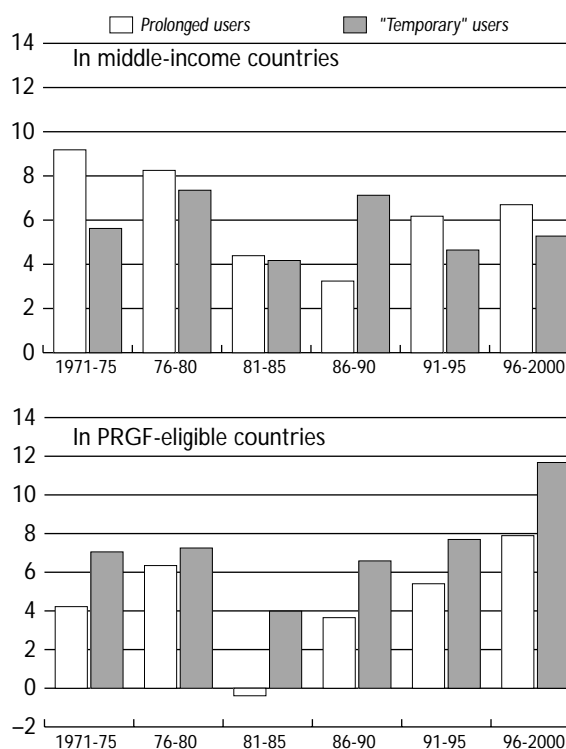
(Five-year average annual change; in percent)



Sources: IMF, WEO database; and IEO calculations.

Annex Figure 3.2. Export Growth

(Average annual change; in percent)



Sources: IMF, WEO database; and IEO calculations.

there are large variations within each group.⁸ As regards fiscal deficits, in both middle- and low-income countries, prolonged users had higher deficits in the late 1970s, but they adjusted faster thereafter and thus had lower deficits than “temporary” users in subsequent periods (see Annex Figure 3.3).

Key fiscal characteristics

Prolonged users have lower and more rigid government expenditure

Among middle-income countries, the expenditure to GDP ratio of prolonged users was consistently and markedly lower than for “temporary” users over 1971–2000. In other words, the prolonged users are not necessarily those with a tendency toward “big” government—indeed the reverse; as will be seen below, the most obvious distinguishing characteristic

appears to be a weak tax base. The differences were less marked for the PRGF-eligible countries.

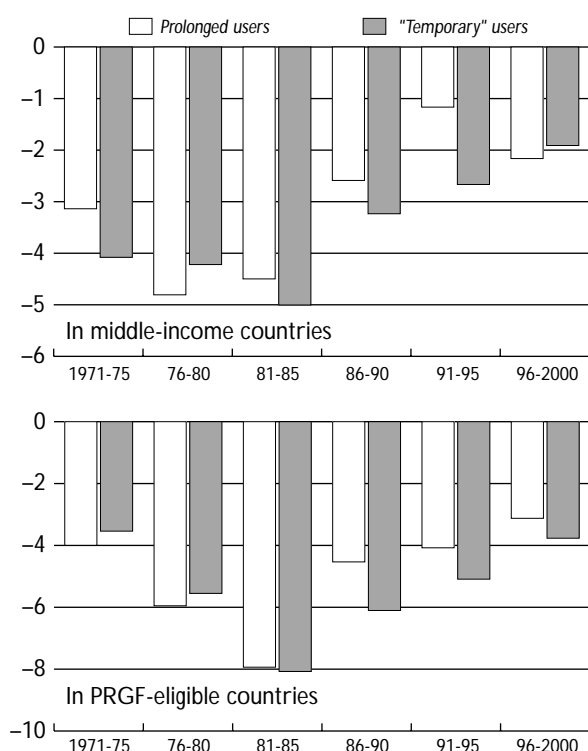
In both low-income and middle-income countries, the government expenditure to GDP ratio expanded significantly less over the last three decades in prolonged user countries than in “temporary” user countries, which might reflect either the fiscal discipline imposed by the successive IMF-supported programs entered into by prolonged users, or simply their generally poor ability to increase revenue collection, or some combination of the two (see below). The likely impact of IMF-supported programs is suggested by the pattern of government expenditure in low-income countries, which exhibits a clear downside break in the mid-1980s, when most of these countries started making extensive use of IMF resources, under newly created concessional facilities (Annex Figure 3.4).

The analysis of the composition of government expenditure further reveals that, regardless of the income group, *prolonged users had higher interest and defense expenditure* (as a proportion of total ex-

⁸See Annex Table 3.3.

Annex Figure 3.3. Evolution of Overall Fiscal Deficit

(Five-year annual average; in percent of GDP)



Sources: IMF, GFS database; and IEO calculations.

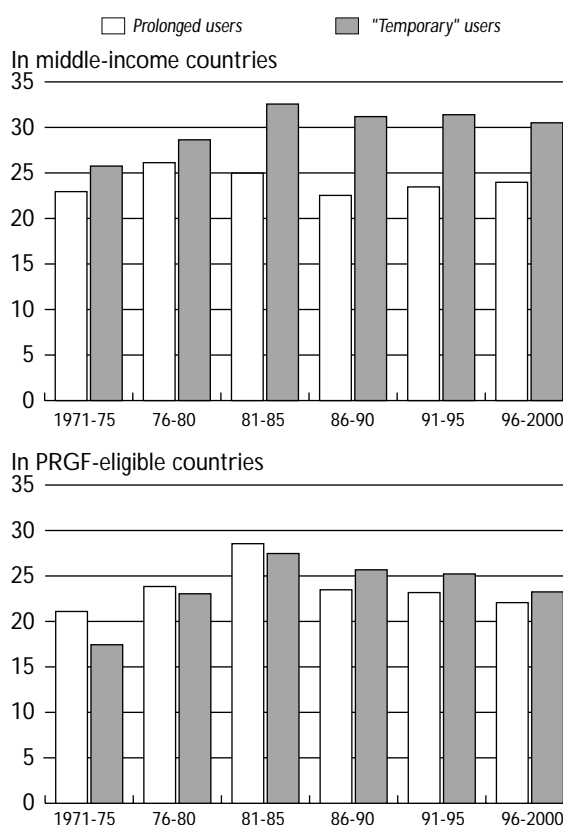
penditure) in all periods since 1970, and especially in the 1980s, largely reflecting a buildup in debt problems (see below). Other things being equal, these differences would result in a more rigid structure of expenditure in prolonged user countries, which might account for a more protracted adjustment process (Annex Figure 3.5).

Middle-income prolonged users collect less tax revenue

Differences related to the tax revenue to GDP ratio are particularly pronounced among middle-income countries: over 1971–2000, prolonged users in that category have consistently had lower tax to GDP ratios than “temporary” users. Both prolonged and “temporary” users have registered increases in that ratio over time, but that increase was faster for “temporary” users up to the 1990s. By contrast, among low-income countries, there was no sustained increase in the tax revenue to GDP ratio over time, and the gap between prolonged and “temporary” users, which pre-

Annex Figure 3.4. Government Expenditure

(Five-year annual average; in percent of GDP)



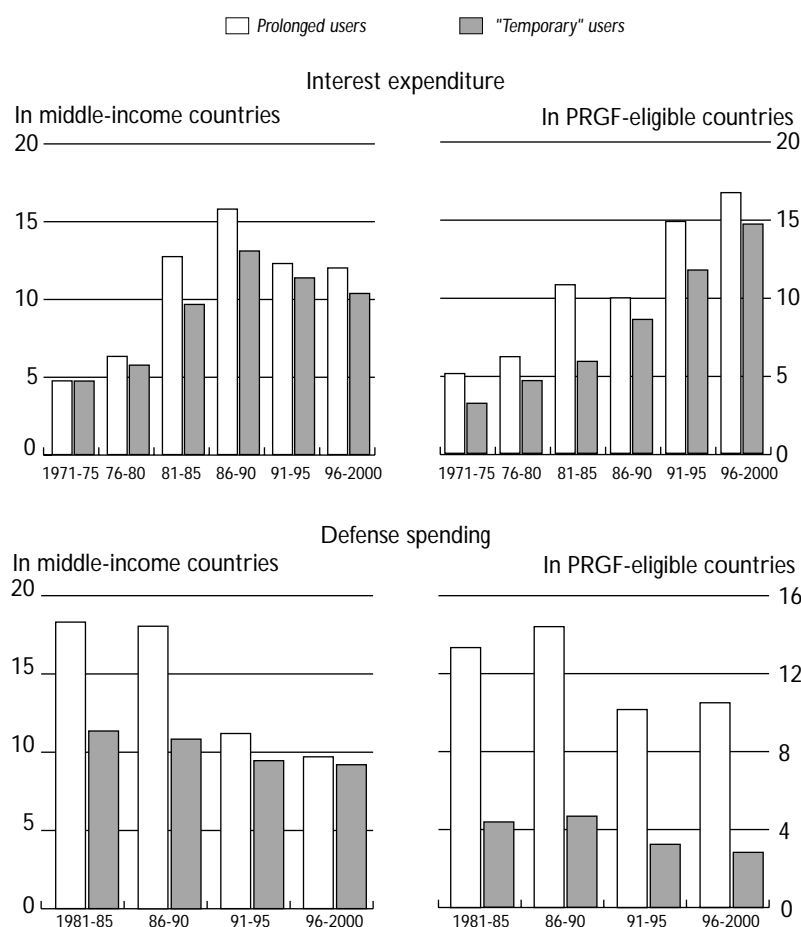
Sources: IMF, GFS database; and IEO calculations.

ailed until the mid-1980s, was eliminated in later periods only owing to a decline in “temporary” users’ tax revenues (Annex Figure 3.6).

Prolonged users faced a higher public debt burden for most of the period

Among PRGF-eligible countries, prolonged users’ stock of public debt (relative to GDP) was three times as large as that of “temporary” users at the beginning of the period. However, differences rapidly diminished from the mid-1980s onward, as the “temporary” users borrowed at a much faster pace than the prolonged users, perhaps reflecting the fact that many prolonged users had already encountered debt problems.

Among middle-income countries, prolonged users initially had a substantially lower public debt stock (relative to GDP) but debt levels for the group built up rapidly during the 1980s (Annex Figure 3.7).

Annex Figure 3.5. Interest and Defense Expenditure*(Five-year annual average; in percent of total government expenditure)*

Sources: IMF, WEO database; and IEO calculations.

External sector**Trade**

For both low- and middle-income countries, but particularly for the latter, terms of trade shocks⁹ were, on average, of greater magnitude in prolonged user countries.

As regards trade openness, there is a marked difference among middle-income countries: prolonged users were continuously less open than “temporary” users, in the sense that their trade to GDP ratio was consistently lower—by 10 to 15 percentage points—

over 1971–2000, even though for both groups that ratio increased over the period (Annex Figure 3.8). By contrast, there is no significant difference between “temporary” and prolonged users as far as PRGF-eligible countries are concerned.

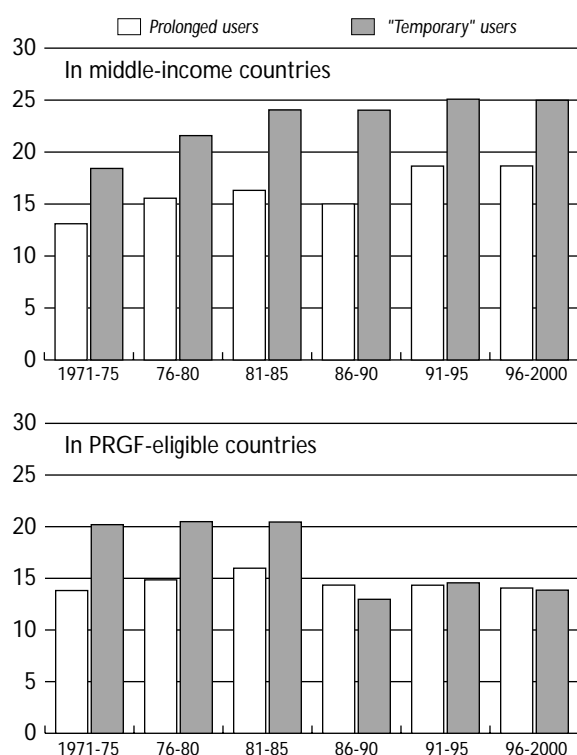
With respect to the composition of exports, *prolonged users* in both PRGF-eligible and non-PRGF-eligible groups had a higher share of primary exports than “temporary” users, and that gap tended to increase over time. The concentration of exports on primary commodities also declined faster in “temporary” users, which may be related to their greater openness to trade (see Annex Figure 3.8).

In keeping with the findings of previous studies on the determinants of repeat UFR,¹⁰ both groups

⁹The definition of terms of trade shocks used here is the same as in Ivanova and others (2001) and Dollar and Svensson (2000), namely the difference between the change in the price of exports weighted by the share of exports in GDP and the change in the price of imports weighted by the share of imports in GDP (see Annex Table 3.3).

¹⁰For example, Bird, Hussain, and Joyce (2000).

Annex Figure 3.6. Tax Revenues to GDP Ratio
(Five-year annual average)



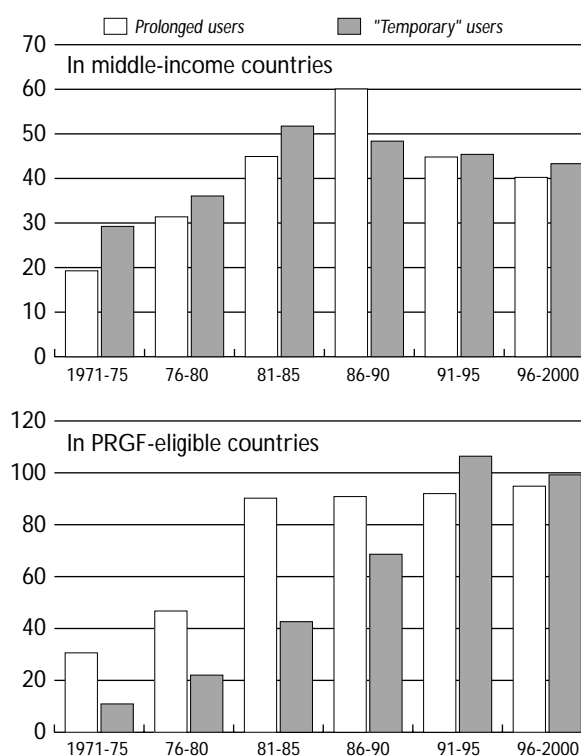
Sources: IMF, GFS database; and IEO calculations.

of prolonged users on average had markedly lower gross reserves (in relation to their external debt) than “temporary” users. However, data on imports coverage by gross international reserves unexpectedly indicate that prolonged users have had a slightly higher coverage of imports than “temporary” users throughout the 1971–2000 period, and the difference, although small, is statistically significant (Annex Table 3.3). Once again, this may reflect the generally lower trade openness of the prolonged users.

Prolonged users generally faced a heavier external debt and debt-service burden

As far as the stock of external debt is concerned, prolonged users had a significantly larger debt/GDP ratio than “temporary” users until the late 1980s, after which the relationship reversed itself, even though the external debt of PRGF-eligible prolonged users kept rising in relation to their GDP. However, the debt-service burden, as measured by the external

Annex Figure 3.7. Public Debt Stock
(Five-year annual average; in percent of GDP)



Sources: IMF, GFS database; and IEO calculations.

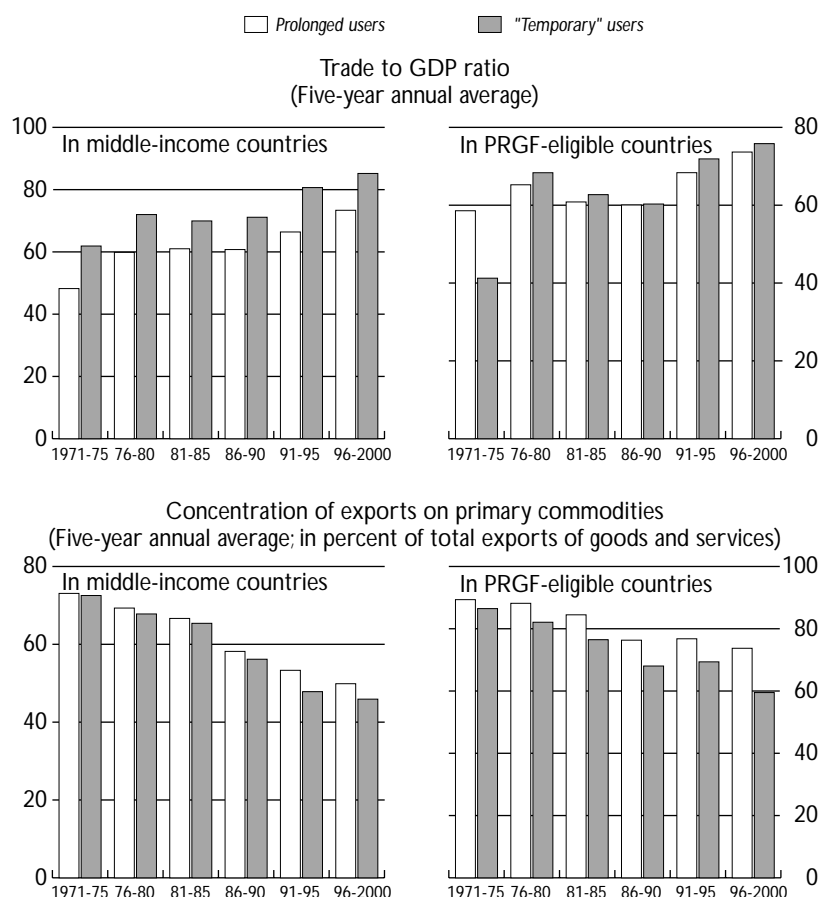
debt service to exports ratio, was significantly higher for prolonged users than for “temporary” users throughout 1975–2000.

Political characteristics

The literature on the effectiveness of structural adjustment programs has emphasized the importance of political economy variables in determining the outcome of these programs.¹¹ It was not possible in the context of this project to collect data on the relevant variables over the entire period under review. However, based on the database used by Ivanova and others (2001),¹² there appear to be few consistent differences between prolonged and “temporary” users as far as political characteristics are concerned.

¹¹See, for instance, Ivanova and others (2001) or Dollar and Svensson (2000).

¹²This database covers the countries that entered into the approximately 170 arrangements with the IMF between 1992 and 1998.

Annex Figure 3.8. Trade Openness and Concentration

Sources: IMF, WEO database; and IEO calculations.

The one important exception is the measure of political instability, which appears to be higher among prolonged than among “temporary” users for both middle- and low-income countries.¹³ Prolonged users as a whole also appear to suffer from ethnic fractionalization to a greater extent than “temporary” users, but this is true only for middle-income countries.

¹³In contrast, measures of political cohesion and of quality of the bureaucracy suggest that prolonged users have a higher degree of political cohesion and a better bureaucracy than “temporary” users. Interestingly, the power of vested interests appears to be identical, on average, in all four country groupings.

Finally, while several authors have found a relationship between IMF-supported programs (related either to their presence or to their design) and the closeness of the relationship between the member country and the IMF’s major shareholders, the comparison between prolonged users and “temporary” users in terms of their closeness to G-7 countries found no major differences.¹⁴

¹⁴See for instance Bird and Rowlands (2001b), Thacker (1999), Barro and Lee (2002), and Ivanova and others (2001). The variable used here to test for the influence of proximity to G-7 countries was the share of G-7 bilateral aid.