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AGENCY FOR INTERNATIONAL DEVELOPMENT

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REPORT ON THE ECONOMIC REFORM PROGRAM IN MADAGASCAR

OCTOBER, 1987

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AGENCY FOR INTERNATIONAL DEVELOPMENT

TABLE OF CONTENTS

Introduction

The past year has been marked by continuing, even accelerating, progress in economic reform in Madagascar. The government continued to hold the line on fiscal and monetary policy, broke new ground in trade liberalization, continued to reduce controls on prices, strengthened transport sector management and allowed competitive forces to push down road transport costs. The progress of reform in agriculture was mixed. Real export crop prices continued to decline in most cases, and exports showed little buoyancy. But in rice market liberalization, which has been the main effort in the agricultural sector, striking changes occurred. As always, the progress was thin, uneven and fragile. But Madagascar seems, in mid-1987, on the way to becoming one of the more dramatic cases of successful liberalization of a controlled economy.

I. Fiscal and Monetary Policies

The targets set down in Madagascar's stand-by agreements with the IMF were met in 1986 and early 1987. The overall Treasury deficit (cash basis) fell from 4.7 percent of GDP in 1985 to 4 percent in 1986. It is expected to fall further in 1987, to a little over 3 percent. Credit policies remained tight; total domestic credit rose only by 10.2 percent in 1986; and credit availability shifted in favor of the nongovernment sector. Credit to public enterprises was sharply curtailed; it rose by 8.6 percent in 1986.

Wage and employment restraint continued. New government hires were limited to 500 in 1986 and 500 in 1987. The wage bill increased by some 18 percent in 1987, less than expected inflation (20 percent). Real incomes continued to deteriorate. Chart I (based on Annex Tables A-1, A-2, and A-3) shows that real wages have been declining steadily since the early or mid-1970s. Civil service salary _rates_ have dropped most precipitously; in 1986 they were only 40 percent of their 1979 level. The sharpest falls occurred between 1979 and 1983; after 1983 civil service _rates_ continued to decline, but average salary _levels_ stabilized. Of all wage earners, unskilled urban workers have fared the best.

The incomes policy implications of wage and agricultural price decisions are indicated in Chart II; (see, also, Annex Table A-7). In its official pricing decisions, the Government of the Democratic Republic of Madagascar (GDRM) has, since 1980, favored agricultural producers over wage earners. Both paddy and export crop producers have done better than urban workers. This movement of the rural-urban terms of trade in favor of agriculture is in fact a longer-term trend, as the chart indicates. Paddy producers have done better since 1983 than the chart suggests, because the data are for official prices, not open market prices.

Chart I

Indicators of Changes in Real Wages

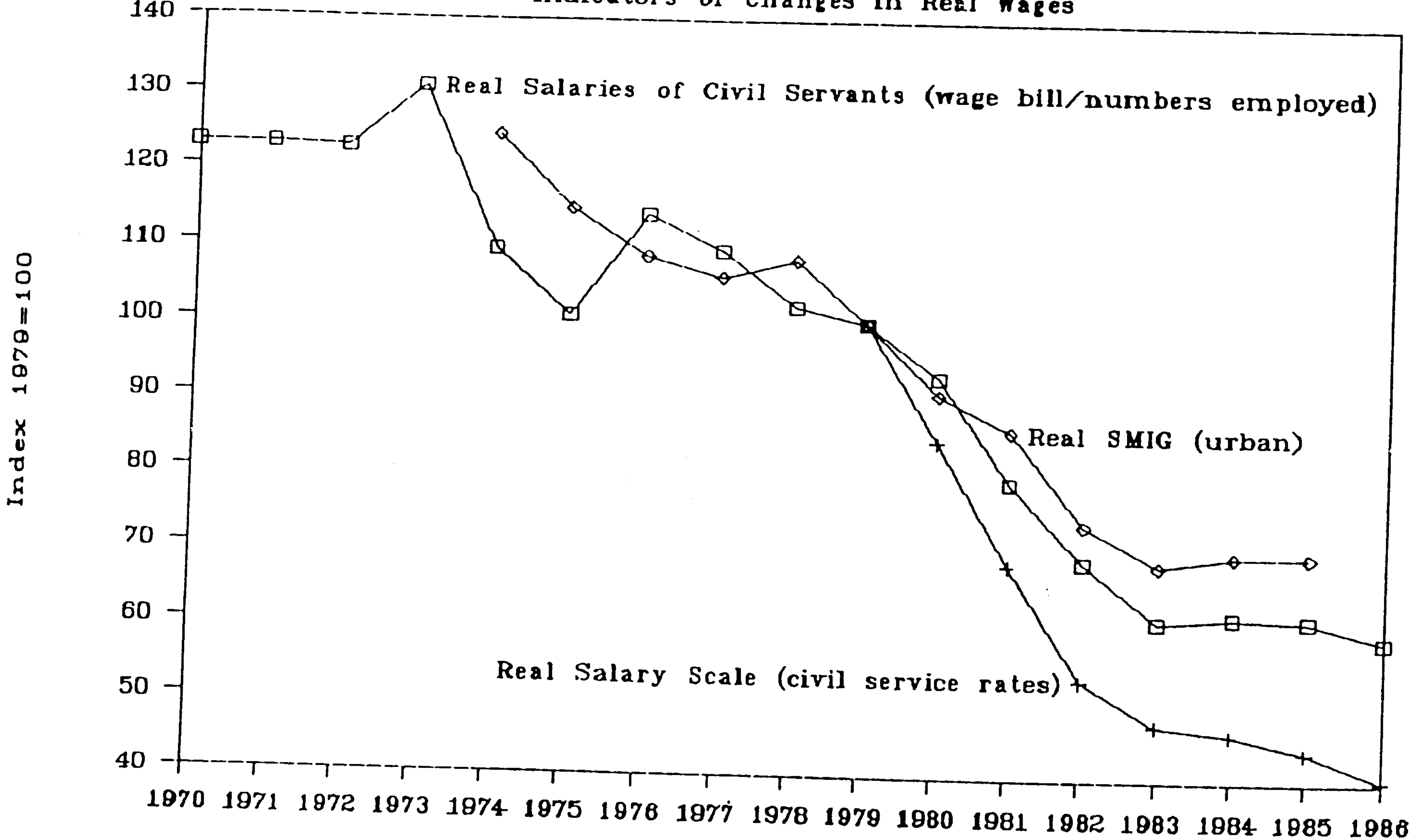
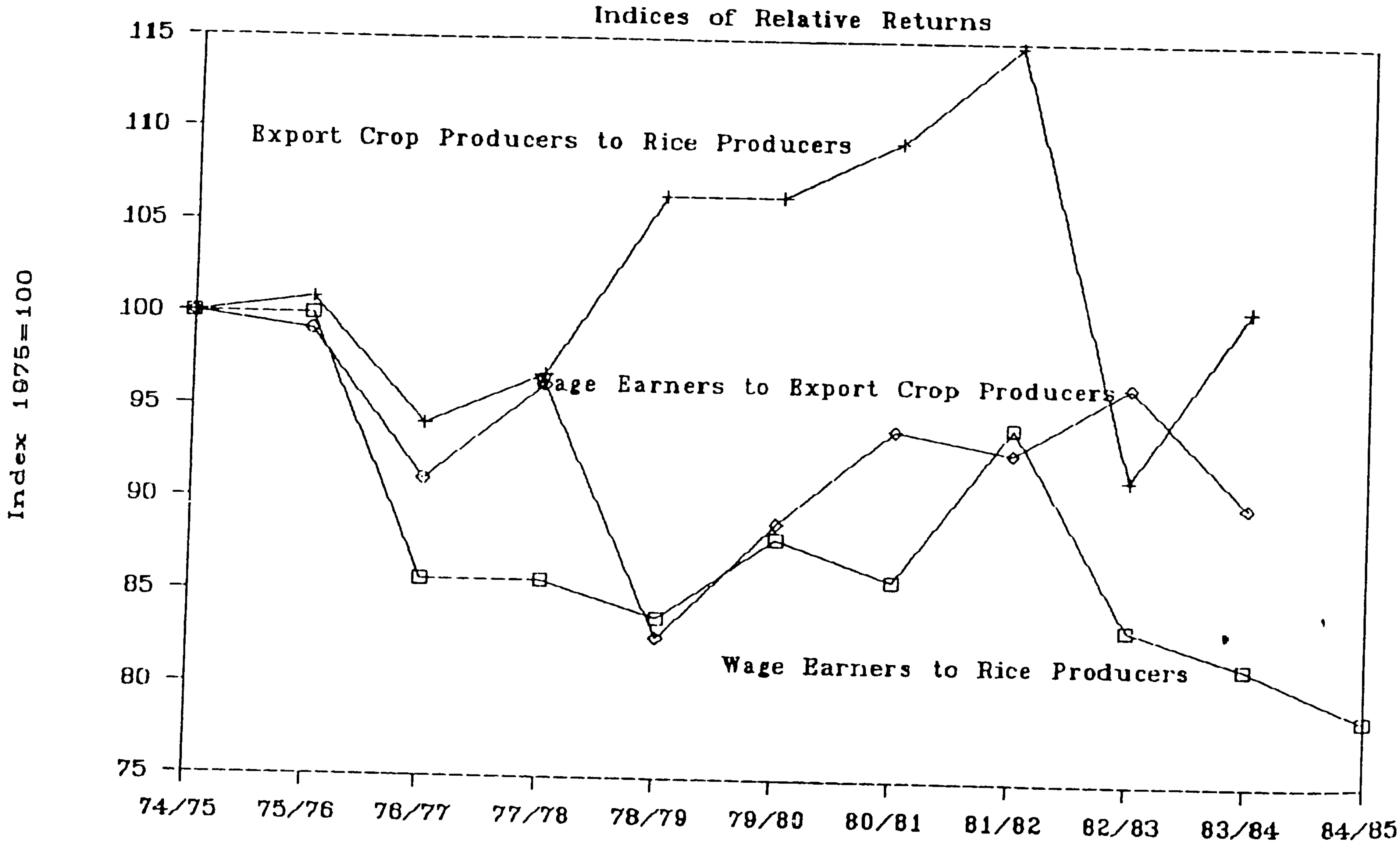


Chart II


Indices of Relative Returns
Index 1975=100
115
110
105
100
95
90
85
80
75
74/75
75/76
76/77
77/78
78/79
79/80
80/81
81/82
82/83
83/84
84/85
Export Crop Producers to Rice Producers
Wage Earners to Export Crop Producers
Wage Earners to Rice Producers

II. Trade Regime Liberalization and Decontrol of Prices

Some innovative reforms were introduced in this area, and an unusually active exchange rate policy was pursued. In January 1987, the GDRM introduced a "Liberalized Import Regime" (LIR or, in French, RIL) as a device to allocate foreign exchange (FE) in a manner more responsive to market demand. Consumer goods, raw materials and spare parts were covered. Importers bid for FE at the official (floating) rate, but had to put down a 10 percent fee on the amount requested. They paid the fee regardless of the amount of FE they received. If they asked for 1 mn. FMG, the fee was 100,000, and if they were only allocated 300,000 (because demands exceeded availability), the effective fee or premium was 30 percent. In fact, the effective fee was about that level in the first four months of 1987.

The LIR was bitterly attacked by many importers for its high cost, uncertainties and inequities. Those with access to FE (from donor projects, for example) imported directly from external suppliers at lower cost. In response, in 1987, the GDRM increased the monthly allocation to the LIR (from the previous 7 mn. SDR per month to 12 mn.) and lowered the up-front fee to 5 percent. The previously divided allocations (one amount for raw materials and spares another for consumer goods) were unified in July 1987, and equipment purchases were included under the scheme. In addition, 80 percent of the products on the import list will be free of controls.

The GDRM has also taken strong exchange rate action. The Malagasy franc was depreciated by 28 percent against the basket to which it is pegged. It floated gradually down in the first half of 1987, and was sharply devalued in late June, from a rate of 850-900 FMG to the dollar to 1,360.

Government has committed itself to move to a system of Open General Licencing by mid-1988. The tariff structure is to be simplified, with rates between 10 and 80 percent, plus a temporary surcharge of 30 percent on some imports to protect domestic industry. All of this is accompanied by deregulation of prices. Profit margin controls have been eliminated except for 16 commodities, and these will be gradually eliminated over the next two years. Also, price controls will be removed on five of the ten goods that are still under ex-factory controls (soap, candles, edible oils, baby foods, condensed milk). Controls will remain only on flour, bread, notebooks and packaging materials; cement prices are to be handled separately.

Reform of the trade regime has thus been substantially advanced. The LIR has so far proved to be an imaginative transition device, preparing the way for an OGL system. The exchange rate cut of June 29, 1987 was courageously deep--enough so to make reduction of administrative controls on imports feasible, if fiscal and monetary policies don't negate its advantages. It should also provide a real spur to exports, though institutional constraints continue to hamper export responses.

Movement has been slow in that respect. A joint public-private committee is to make recommendations on the liberalization of export institutions. But not much has yet happened except a reduction of entry restrictions for those engaged in nontraditional exports.

III. Transport

My 1986 report noted the many structural problems in the transport sector: market isolation of some producing regions because of impassible roads; lack of spares for trucks; low and costly port capacity; poor utilization of that portion of the national truck fleet in the public sector; trucking and bus rate policies that discouraged transport on bad paved roads (because costs are higher than official tariffs on such roads).

The report noted elements of progress: notably Air Madagascar's move into profitability, and improved railroad management. But in road transport and ports there was little to cheer about. Local authorities intervened extensively in road transport, restricting routes, setting tariffs, controlling entry, imposing selective controls on commodity movements, even restricting operations of vehicles outside the Faritany where they are registered. With respect to ports, Tomatave remained a disaster area, with high theft rates and exceedingly low productivity.

In the 18 months since January 1986, some ground has been lost: Air Madagascar's deficits have reappeared. Some problem areas remain murky--local controls over trucking, for example. Official national policy continues to restrict entry into passenger service. No progress seems to have been made in dealing with the secondary ports.

However, some large steps forward are apparent.

- The road construction/rehabilitation program has clearly begun to bear fruit. In the early 1980s, it took 3 1/2 days to drive between Tana and Tulear. Passenger vehicles now take only 16 hours, trucks 21 hours. The Tana-Tomatave trip now takes 5 1/2 hours instead of 12; trucks do it in one day instead of three. Truck trips between Tana-Antsirabe, which required a day, now take 5 hours. By 1989 all the main axes of the national road network will be in place.

- Better roads and more imports of vehicles and parts have created keen competition in road transport, which in turn has driven tariffs below the "official" or "indicative" rate. Freight tariffs between Tana and Tomatave have fallen by more than 60 percent in the past five years--from 60 FMG per kg/km to 18 FMG. There is now said to be a glut of transport services on that route.

- The national truck fleet appears to have become more private. Of the estimated 4,000 trucks, only 10 percent are said to be operated by public sector entities. The military truck fleet essentially disappeared by 1985. Entry appears to be genuinely free for freight transport.

- The engineering and construction units of the armed forces are meeting some needs in secondary road construction or rehabilitation. They claim to have done 130 km. of coffee evacuation roads in the southeast. Now they are concentrating their equipment and engaging in some joint ventures with private contractors, which could result in a considerable increase in rural construction capacity.

- New management at the Port of Tomatave has introduced numerous improvements. Since early 1986, productivity in rice handling and in container discharge is up over 100 percent. Tariffs were raised by 50 percent in December 1986. The theft problem remains unresolved, however, and overmanning persists; the 4,200 port employees are supposed to be cut to 2,500. Some toughening on the labor relations side was evident in 1986. The common pattern has been for workers to strike in December for the "13th month" bonus, and for management to give in after brief resistance. In 1986, the 13th month was given only to those being paid the minimum wage.

- The RR between Tomatave and Tana has thus far retained its freight business; tonnages carried rose from 276,000 in 1984 to 330,000 in 1985, 301,000 in 1986 and probably 400,000 in 1987. Passenger receipts, however, fell by half in 1986 and the decline continues in 1987, due to lower road transport tariffs and quicker travel time. The financial position of the RR remains problematic.

1'

IV. Agricultural Policy Reforms

Four of the major elements in the agricultural reform effort have been the liberalization of export marketing, improvement of incentives for producers, the liberalization of rice markets, and the buffer stock. In two of the four reform areas (discussed first), progress is slow or nonexistent.

Export Marketing

Export marketing remains heavily controlled, with the traditional exports "reserved" for parastatal trading firms. Progress is being made in some nontraditional exports, where entry is easier; shrimp exporters are numerous, and volumes have grown rapidly in the past few years. According to some observers a certain amount of informal privatization or decentralization is taking place in minor exports like lobsters and lychee nuts. But regulations remain endemic and monopolization typical in marketing of major agricultural exports.

Export Price Policy

Forward movement is somewhat more apparent in export price policy, but is not noteworthy. Chart III and Annex Tables A-3 and A-4 show that real prices of coffee and pepper turned up a little after 1983, but generally the export crop price picture remains dismal. Real prices of the major exports are about half their 1979 level (see Chart IV and Annex Tables A-4 and A-5). Government has not passed on to producers the proceeds of the depreciating Malagasy franc.

Not only is the general level of real remuneration for export crops low, relative returns have shifted sharply in favor of food crops (Chart II and Annex Tables A-6 and A-7). Where substitution is possible (in the northeastern parts of the country, for example), resources have been drawn into paddy production. As a number of observers have pointed out, in this respect, the adjustment program has turned comparative advantage on its head, by its priority on rice production. The ratio of domestic coffee to rice prices in 1986 was 2 to 1, while for international prices it was about 10 to 1.[1]

Rice Marketing Liberalization

Unlike the first two agricultural reform efforts, the liberalization program in rice marketing continues its string of

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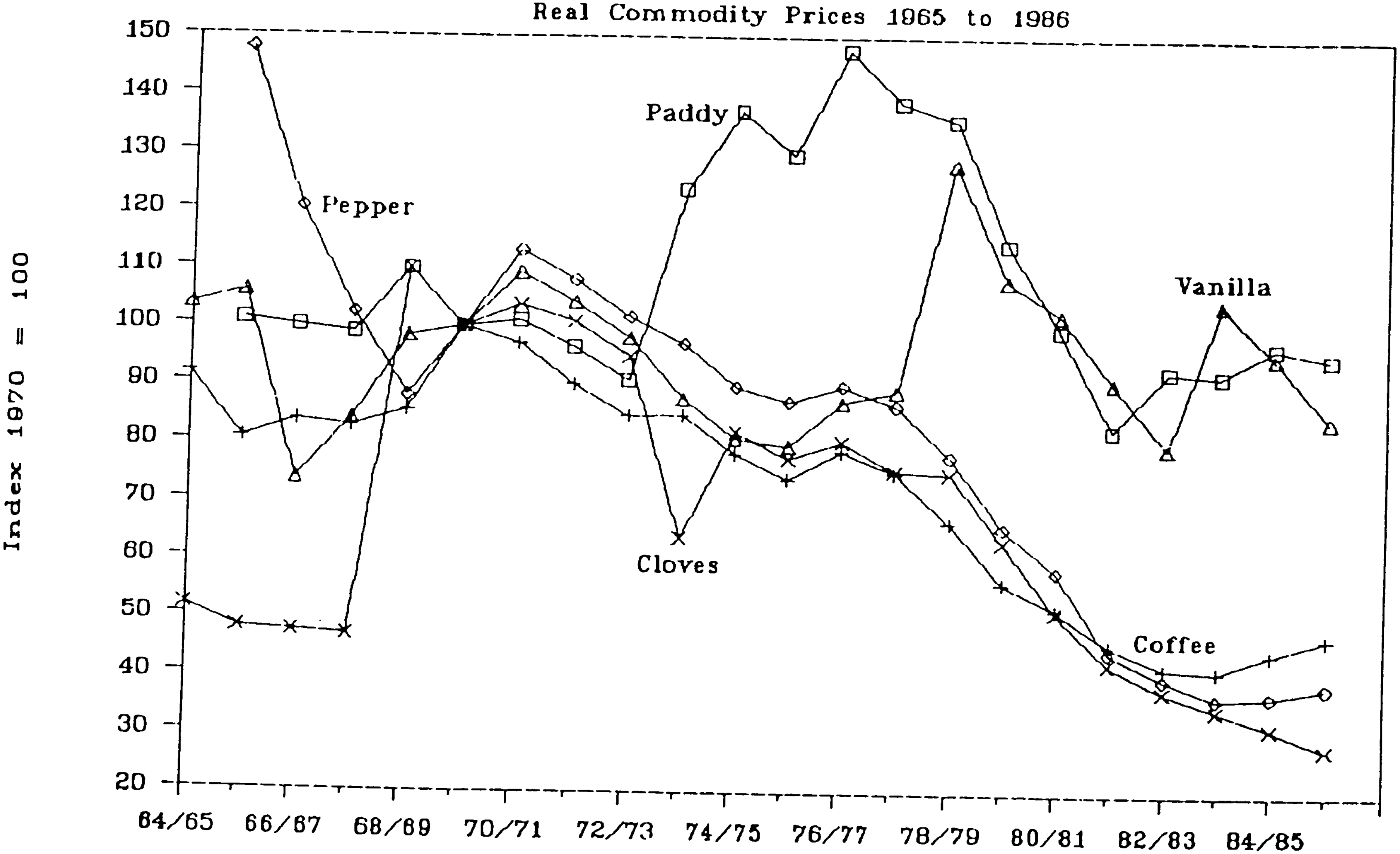
1. This point is made by Phillipe Hugon, in République Française, Ministère de la Coopération, Rapport de la Mission d'Evaluation, Novembre 1986.

8

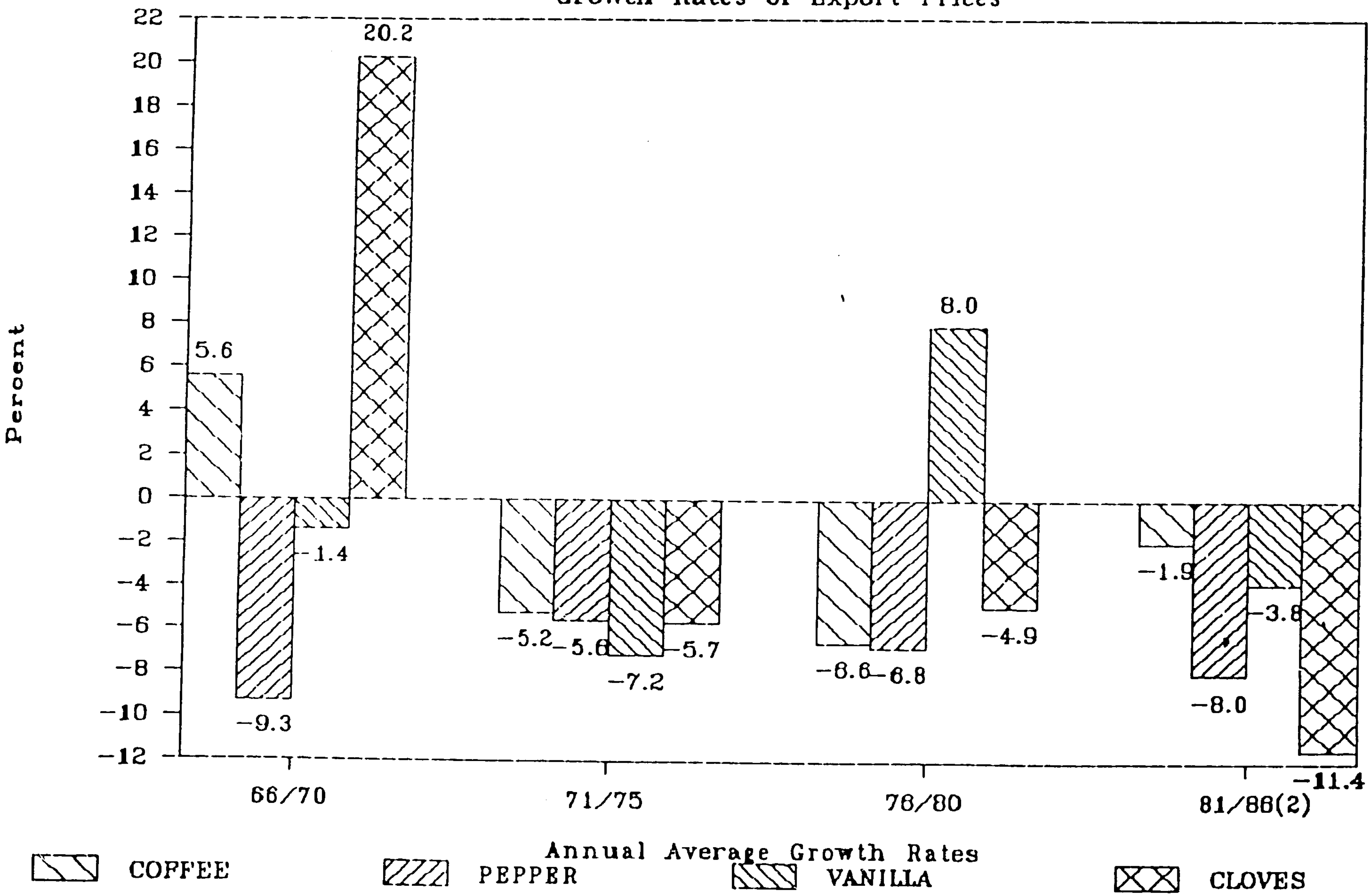
Chart III



Real Commodity Prices 1965 to 1986
Index 1970 = 100
150
140
130
120
110
100
90
80
70
60
50
40
30
20
64/65
66/67
68/69
70/71
72/73
74/75
76/77
78/79
80/81
82/83
84/85
Pepper
Paddy
Vanilla
Cloves
Coffee

Chart IV

Growth Rates of Export Prices



successes. For the second year running, it confounded its critics and this year (1986/87) the positive effects have been stronger than in 1985/86.

Rice market liberalization was introduced in the face of much skepticism, which derives from a certain number of well-worn ideas.

- First, critics said, markets in Madagascar work poorly; real competition does not exist. Liberalization, therefore, will mean the simple replacement of state monopoly with private monopoly and rigged prices. It will benefit only middlemen. Consumers will see their incomes and their nutrition levels fall because of higher rice prices, while producers will be no better off than before because price increases will not be transmitted back to them. Even if producer prices rise, benefits would go mainly to bigger farmers who are net sellers, and also who can store grain; this is so since smaller farmers buy during the soudure at highly inflated prices.

- Moreover, even if some producers did get higher returns, output effects would probably be slight since roads are bad, fertilizers and good seeds scarce, useful consumer goods rare.

Experience prior to 1986 had already challenged these beliefs. For example, regional rice price differences fell even in the first phase of the liberalization. Within the Faritany of Antananarivo, retail price differentials between surplus and deficit areas fell by two-thirds, according to the October 1985 MPARA evaluation report.[2] Moreover, many new truckers entered the rice market, rice millers created new distribution networks, state trading companies broadened their participation in the wholesale trade, many small mills (décortiqueries) came into the market--90 were authorized in 1985, compared to 11 in 1983. All of these responses indicated the emergence of more developed market institutions and a more competitive market structure.

However, until recent months it was hard to know how fast and how fully these structural changes in rice markets led to higher producer prices. In 1985 many farmers had been paid as little as 90 FMG/Kg. for paddy, while retail levels soared to three, four or five times that price. Direct data on prices paid to farmers were, and still are, sparse. But some response could be identified. One way to estimate the response is to look at

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2. MPARA (AIRD), Impact de la Stratégie d'Autosuffisance en Riz.

rural market data; prices there should not differ too much from producer prices, since many farmers will sell directly to consumers or bulk buyers in these markets if the price offered at farmgate is too low. The MPARA study cited earlier did a sample of rural market and producer prices in mid-1985, and found the two prices did tend to be close; in the Faritany of Antananarivo, researchers observed that where rice was selling in rural markets for 184 FMG/kg., the producers were receiving 165 FMG/kg.

More recent data (reproduced in Text Table I) suggests that producer prices responded somewhat sluggishly in 1984, rising some 14 percent on average that year, compared with an increase in free market retail prices of almost 25 percent. Between 1985 and 1986, similarly, retail prices rose appreciably more than producer prices. But in 1986 farmgate prices soared; they rose ten times as fast as retail prices.

"Success" is still only partial. But the reform showed at least that market signals flowed as they are supposed to: producers benefitted, to an extent that is probably without precedent. The survey of liberalization results in Lac Alaotra estimates that average money income from paddy sales more than doubled--from 167,000 FMG in 1985 to 411,000 FMG in 1986. That's important in itself since most rice growers benefitted, though land distribution favored farmers with larger holdings, and consumers paid a substantial price in terms of reduced income and worse nutrition.

The real payoff has to be in terms of increased production. On this, positive evidence exists, but is mainly indirect. First, input purchases rose smartly between 1985 and 1986. The Lac Alaotra inventory of 500 plows was sold out. Wages apparently doubled in the main rice producing regions of Lac Alaotra. A USAID survey of agricultural input sales in 1986 indicated that despite sharply rising prices, all the companies surveyed increased their sales from 1985 to 1986. The main fertilizer importer (SEPCM) increased sales of NPK by 20-25 percent, which parallels the experience of COROI, LANDIS and most of the other suppliers.

Moreover, producers are bringing more land into cultivation and farming it more intensively and better. According to the SOMALAC monitoring report:[3]

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3. GDRM, Projet Lac Alaotra, <u>Suivi de l'Impact de la Liberalisation de la Commercialisation du Paddy au Lac Alaotra, Enquête Première Phase, Juillet-Aôut 1986</u>, S. J. Razafimandimby, main author.

TABLE I

RICE PRICES, 1980-1987
(FMG/KG)

	Retail Price Official	Retail Price Market[2]	Producer Price[1] Official	Producer Price[1] Market
1980	60	--		
1981	75	--	57	--
1982	140	--	63	--
1983	142	250[3]	80	--
1984	189	295	86	108
1985	225	419	100	120
1986[4]	247	553[5]	110	137
1987			133	286

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1. Conversion rate of .67 assumed in calculating rice price from paddy equivalent.

2. IMF, RED, February 1987. MPARA cites, in other sources, prices that differ by some 10 percent from these.

3. August-December.

4. Nine months only.

5. January-September.

> The majority of landowners plan to cultivate all their rice fields, and are contemplating taking on more land by sharecropping or rental. A reverse phenomenon is also happening: farmers who have land but lack means to produce are thinking about renting rather than cultivating themselves.
>
> Lessees and sharecroppers whether big or small, plan to get more land.
>
> The race to drain marshland is speeding up. Rice fields that were too high or badly irrigated and were abandoned, are being rehabilitated.
>
> Rainfed rice fields are spreading fast. They are mainly extensive in nature, and the leading actors are farmers with tractors; this is most evident on the hills to the west of Lac Alaotra.
>
> The practice of double rice cropping is beginning--with the rice growers themselves doing experimental ventures. . . . Many also are introducing wheat cultivation.

The survey team asked rice growers (in July-August 1986) what their spending plans were for heavy investment (plows and oxen) and inputs. The results were as shown in text Table VI.

All is not peaches and cream. The survey points out that bigger farmers are benefitting more than smaller, and the rising profitability of land may lead to more uneven land ownership patterns. Moreover, the input supply system is inadequate, and devaluation plus increased demand has pushed up all input prices, so farmers may not be able to realize their intended spending on equipment and other inputs.

Nonetheless, the high 1986 prices seem to have spurred enough intensification of production to significantly affect marketings and prices. The official estimate is that paddy production rose only by 3.1 percent in 1986, which is nothing out of the ordinary. (Estimated production rose by this amount in 9 of the last 20 years.) But officials in rice growing areas say this estimate is much too low; in the north, increases of 20-25 percent are claimed, and of more than 15 percent around Antsirabe. The high rates of storage in Lac Alaotra, indicated in the monitoring report, combined with the tendency for prices to fall well into mid-1987, suggests that production rose more than the official 3.1 percent.

<u>The Buffer Stock: Vindication of Indirect Regulation</u>

The second successful aspect of the agricultural reform program is the operation of the buffer stock. Many observers

TABLE VI

Investment and Input Purchase Plans, Lac Alaotra, July-August 1986

Zone	Percent Planning to buy Plows and Oxen	Percent Planning to buy Inputs
North	52	78
West	60	79
Andilamena	59	62
East	35	59
South	51	62

doubted that the buffer stock could be set up in time for the 1986-87 soudure. Members of the French Ministry of Cooperation evaluation team, for example, commented in July of 1986 that given the slowness of bureaucratic procedures, it seemed unlikely that the regulatory stock would be in place by October. Yet it was well in place at that time.

In addition to this administrative triumph, the buffer stock was a source of supply open to all buyers, established and new. It thus encouraged entry and increased the competitiveness of rice marketing.

Most important, finally, is the fact that the buffer stock worked--or at least seemed to work--and earlier skepticism has given way to widespread belief in its efficacy. The proof of the pudding, to most observers, is that prices in the winter of 1986/87 never reached the levels of a year earlier, as text Table II shows.

There is, however, reason to doubt that buffer stock sales had the effect imputed to them--the fact that it was such a small part of available supply. Of its total stock of 30,000 tons, its sales were about 12,000 tons, as shown in text Table III.

If the usual assumption about marketings is accepted (15 percent of production) then about 370,000 tons of rice were available for marketing in 1986, to which sales from carryover stocks would add significantly. So buffer stock sales contributed less than 3 percent to total rice availability.

A much more powerful factor was the relatively high level of imports and the substantial increase in stocks, both on-farm and by traders as well. Imports in 1986 (160,000 tons) were well above levels of the previous two years (text Table IV). Some 40,000 tons were said to be stocked in January 1987. And this may be an underestimate, for by all accounts farmers in Lac Alaotra, the main surplus area, had stocked relatively large proportions of the good 1986 harvest.[4]

Rather than causing the lower prices in late 1986 and early 1987, the buffer stock probably followed market prices down. The temporal sequence seems to have been that way. In Tana, average prices fell steadily in the first two weeks of February--from over 500 FMK/Kg. to about 400, which was the buffer stock price to retailers. Unexpectedly high production and higher imports

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4. GDRM, Projet Lac Alaotra, Suivi . . . , ibid.

TABLE II

Monthly Price for Rice in Antananarivo
(FMG/KG)

Month	1985	1986	1987
January	325	769	506
February	397	714	482
March	423	690	467
April	381	486	428
May	292	419	360
June	284	420	315
July	309	486	
August	369	527	
September	406	537	
October	482	554	
November	563	530	
December	724	525	

SOURCE: MPARA, cited in USAID, Food Program Evaluation Report, August 1987.

TABLE III

Sales from Buffer Stock
November 1986 to April 1987[1]

Month	Total Sales (MT)	Sales/Day (MT)	Clients/Day (Average)
November	2620	130	192
December	3759	193	240
January	2856	136	189
February	1776	106	143
March	830	44	93
April	286*		

*Only four days of operation

1. Includes TANA and Toamasina.

TABLE IV
Estimated Domestic Production and
Imports, 1981-1986

Year	Paddy Production (Mn. Tons)	Total	Rice Imports('000 tons) Commercial	Concessional	Grant
1981	1.9	193	(170)	(132)	(10.2)
1982	2.0	351	(266)	(63)	(23)
1983	2.1	179	(93)	(75)	(12)
1984	2.1	114	(64)	(24)	(26)
1985	2.2	116	(67)	(42)	(7)
1986	2.2	159	(52)	(73)	(34)
1987	(2.3)				

SOURCE: L. Pouliot-Desjardins, "Estimation of the Potential Effects of the Buffer Stock on Madagascar's Rice Needs," USAID, May 1987.

were clearly relevant. The GDRM raised the volume of sales (at below market prices) through the official distribution system, from 7,000 tons a month between August and December 1986 to 8,200 tons in January and 9,000 tons in February--an amount, incidentally, that violated its agreement with the IBRD. An additional 8,000 tons had been distributed in Tana and Tomatave, to victims of floods and the cyclone.

An additional indication that the buffer stock was selling at market prices rather than pushing prices down is the fact that none of the buyers from the stock appear to have sold above the 480 FMG/kg. retail price that they were "required" to sell at. This suggests that no "rent" was incorporated in that price.

It is possible that the indirect effects of the buffer stock presence played a more decisive price-making role than imputed to it here. The existence of a large back-up commitment from USAID and the WFP implied that the buffer could conceivably bring into the market amounts large enough to sustain its selling price. Also, the buffer could have induced enough nervousness on the part of inventory-holding traders to make a difference. Some observers think this "flushing-out-of-stocks" result was crucial.

However this may be, the important point for the reform program is that many people believe the buffer stock was responsible for the more stable and the lower rice prices for urban consumers in the winter of 1986/87. And what makes that significant is that it is probably the first time that an indirect policy instrument--the use of the market instead of direct controls--has shown its power. As mentioned earlier, at least part of the underlying resistance to liberalization in Madagascar derives from the widespread conviction that markets don't work, which generates the predilection for administrative controls. So this apparently successful use of market instruments helps erode the belief system that sustains *dirigism*, which is real progress.

Several other aspects of the buffer stock "victory" are worth mentioning. First, it was made dramatically apparent that rice prices can go down as well as up, and that "speculators" can lose as well as gain. According to the corridor wisdom in Tana, the private trading sector, which "hoarded" rice stocks, had to liquidate their stocks when prices began to fall in January. In fact, it seems that this may be exaggerated; larger traders we talked to claimed to have liquidated their rice holdings earlier. It was mainly the parastatal trading firms that were hurt. But in any case, the widespread notion that "speculators" always win has been discredited in popular thinking.

Secondly, the GDRM has moved strongly away from the prevailing official distribution system (ODS). The figures for urban areas as a whole are shown in text Table V. The change is particularly striking in Tomatave, where until 1984 there was virtually no legal rice outside of the ODS. The open market provided about one-third of consumption in April and October 1985 and 62 percent in November 1986. In Tana, in November 1986, 50 percent of consumption was being supplied by open market sales, from less than 5 percent before the reform.

V. The Vigor and Fragility of Rice Marketing Reform

Rice market liberalization has moved forward despite formidable institutional obstacles. In this sense it shows surprising vigor and power. At the same time it--and the whole package of market-oriented reforms--remain vulnerable and subject to rejection by the Malagasy authorities and people. This paradox deserves attention.

Reform programs, we have begun to learn, are not happenings or events, but processes. The replacement of controlled with competitive markets is a process that often begins, for example, with a new rule saying that anybody can buy, sell, transport and process something--say rice. That's the first layer of reform, so to speak. But then, as the process unfolds, it becomes clear that existing institutions, individual stakeholders and other policies are working against the liberalization. Regulations often remain in force that limit who can buy (licensed parties), when (only after the official buying season), where (in nonreserved zones), at what price (only the "official" or "intervention" prices). Moreover, basic prerogatives of local authorities usually remain in force. Informal roadblocks persist. Papers are required to move rice between regions. Local authorities have traditional obligations to assure local food security, and sales or processing of staple foods may be an important source of taxes or private gain for village *notables*.

The rice liberalization program in Madagascar has run into many of these obstacles.

- From the start, local authorities set down restrictions on the number of "collectors cards" (traders' licenses) they issued. And they put down restrictions on collectors and transporters--for example, until 1986, a requirement to store in the Faritany of purchase some reserve stock of rice for local emergencies.

- Despite the theoretical freedom of prices existing after June 1985, many of the state trading companies continued to regard floor prices as "official" prices. The price control system, relying on cost build-ups or *differentials* remained, and still remains, in force in

21

TABLE V

Percent of Rice Provided by the Official Distribution System, Open Market and Autoproduction in Urban Areas 1982-1986

	ODS		Market		Self-Produced
	FMG/KG	%	FMG/KG	%	%
1982					
November	140	88	318	8	4
1983					
April	140	76	234	11	13
August	140	76	223	13	11
1984					
January	145	75	273	21	4
1985					
January	210	67	313	31	2
April	222	57	303	31	12
October	280	52	435	40	8
1986					
April	250	59	385	28	13
November	287	36	541	62	2

SOURCE: MPARA, cited in USAID, Evaluation of the Food for Progress Program in Madagascar, August 1987.

many areas. That is, informal ceiling price regulations have persisted despite the fact that they had been eliminated by official decree.

- The state trading companies have persistently sought to avoid competition. Under instructions to assure producers that buying stations be located in each producing area, they tried to set up what were in effect regional monopsonies. In the Faritany of Antsiranana, for example, the zoning arrangement reserved one Fivondronona per state trading firm. Even companies with warehousing and buying facilities in a "reserved" zone were excluded from a zone allocated to another company.[5]

- Another example of competition-restricting action was recently observed. Fertilizer distributors are, according to one report, tending to form cartels, with each distributor monopolizing the import and marketing of a given fertilizer formulation.[6]

- Until 1986, at least, and probably now as well, traders operate in a net of regulations that increase uncertainty and risk. For example, officials at the Fokotony and Fivondronon levels are responsible for issuance of collectors cards. They can, and often do, insist on reporting of purchases and stocks as a condition of such licencing. But the price control rules have been unclear. So traders (or millers) who declared their stocks risked having them sold at the <u>differential</u>-determined ceiling prices--i.e., in 1985 and 1986, much below free market prices.

- In 1986/87 other institutional roadblocks to liberalization became apparent, as liberalization was extended to the two major surplus producing regions, Lac Alaotra and Fifabe. Lac Alaotra, where 65,000 tons of paddy were marketed by the parastatal SOMALAC, is the most critical area.

<u>The Lac Alaotra Version</u>

Formerly a legal monopsony, SOMALAC found itself faced with intense competition. It had great difficulty in organizing its

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5. Producer interests were poorly served by these arrangements. In some cases, the zonal monopsonist lacked financing or transport or storage and hence could not purchase available supplies.

6. D. J. Rhatigan, <u>MARS Private Sector Rice Study</u>, for USAID/Tana, May 1987, p. 10.

buying. The 20-odd trucks it used to rent from public and private transporters were unavailable; only four could be hired. But more important were the classic "principle-agent" problems: how to deal with the new fact that single fixed prices no longer existed.

> The basic approach was to give to buying agents (*agents collecteurs*) a price band within which they could freely act according to market conditions. Unfortunately SOMALAC wasn't satisfied with the results; the field agents always tended to apply the price at the top of the band. And once the competition drove prices beyond that ceiling (which is often the case) the agents had to wait, doing nothing, until they received new directives from SOMALAC management or their supervisors.[7]

SOMALAC tried to hold its market share by various measures--for example, guaranteeing peasants rice in the *soudure*, equal to 10 percent of their purchases, and giving a 10 percent discount on inputs and equipment.

But those measures were not adequate. So SOMALAC and the other state trading companies joined with the local authorities to fix ceiling prices. In June 1986 they agreed not to buy for more than 150 FMG/Kg. The agreement held only for a few weeks, however; it was shattered by competition from outsiders. The state trading companies tried again in July. This effort also failed.

Chart V (reproduced from the SOMALAC liberalization monitoring report) shows the two brief periods of price stability imposed by the cartel's price fixing arrangements--roughly the last two weeks in June and a week in July. But the forces of the market could not be denied. Prices doubled between May and July and were in many instances three times higher than they had been in 1985. Chart VI, reproduced from the same report, shows how the market competition was reflected in buying prices of three buyers.

The Fifabe Experience

At Fifabe, similar events occurred. When liberalization became a reality in 1985 one Fifabe response was to close all roads during the harvest season. It had little effect. Fifabe's

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7. GDRM, Projet Lac Alaotra, *Suivi* . . . , ibid., p. 10. The employees responsible for buying stations or weighing also took advantage of the rapid changes and differential buying prices that characterized the market. They bought with their employers' advances, then sold at a higher price to a third party without recording the first purchase. This practice led a number of collectors to quit the market (p. 13).

21

CUMENT N°2

EVOLUTION DES PRIX DU PADDY DANS LE TEMPS

Prix pratiqués sur le poste SOMALAC d'Ambodivandrika, Zone Nord

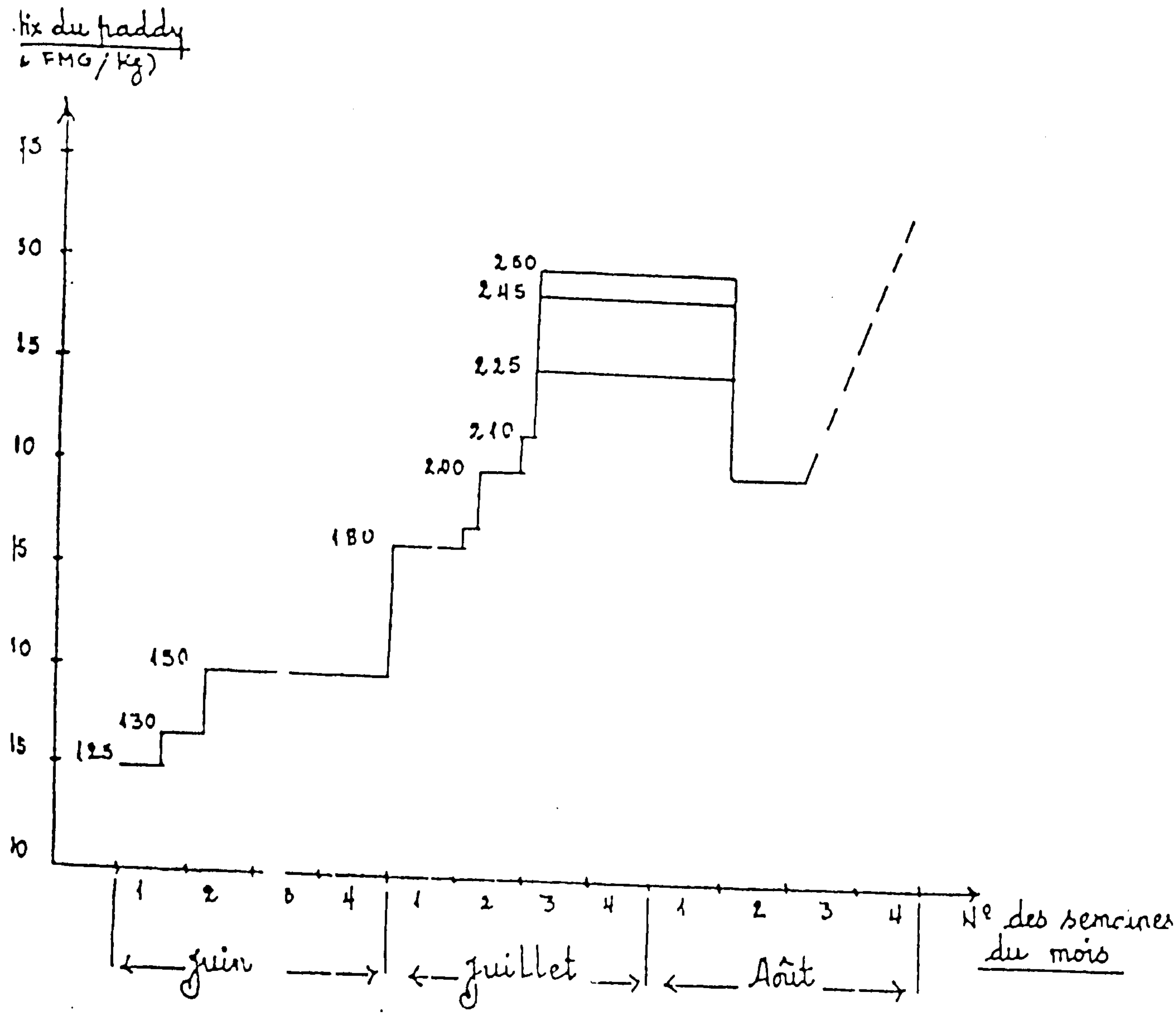
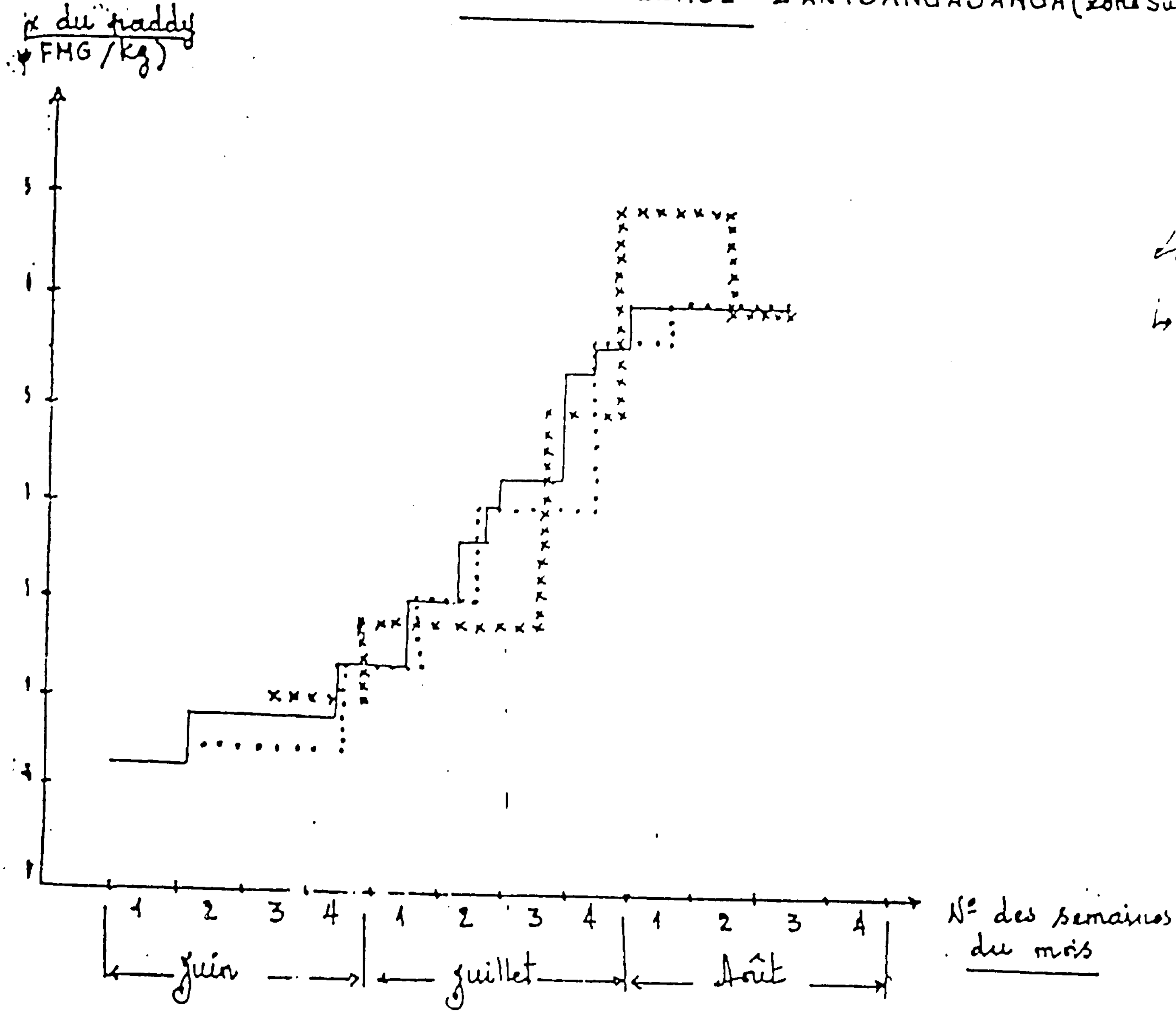


CHART VI

DOCUMENT N° 4

VARIATION DES PRIX SELON LES COLLECTEURS

PRIX PRATIQUES AU VILLAGE D'ANTSANGASANGA (Zone Sud



SOMALAC
FIZALAOTRA (Rizerie RAMAHANDRY)
SINPA

purchases of paddy fell from 21,000 tons in 1984 (pre-liberalization) to 8,000 in 1985 and 10,000 in 1986. As at SOMALAC, prices soared--from 80 FMG/Kg. in early 1985, to 120 later in that year and then to 200 in 1986.

The liberalization posed for Fifabe management the important question of how to organize primary marketing. The response in 1986 was to split the task. They bought 40 percent of their acquisitions from private collectors and 60 percent from the "Vatoeka," the economic committee of the Fokotony. In 1984 they had turned for primary marketing to groups called UPRs (Unités de Production Rurale). These are composed of farmers on Fifabe facilities organized into a kind of cooperative. The UPRs managed, in the preliberalization market, to collect 21,000 tons, but not entirely satisfactorily; considerable amounts of money apparently disappeared through fraud.

For 1987, the management of Fifabe decided to purchase only from the Vatoeka. This economic committee of the Fokotony receives the 2 FMG/Kg. fee for collection costs. It is usually composed of notables--the president of the Fokotony, the largest landholder, etc. The functions of the Vatoeka include, in addition to buying paddy, the buying of groundnuts and programs to deal with problems of theft. They are in effect the economic arm of the Fokotony.

The consequences of this concentration of monopsony power in the Vatoeka are unclear. One negative result however is a strengthening of the propensity to limit entry. This is a general tendency, manifested by delays in granting collectors cards, harassment of "outsiders" with cards, and outright refusals to grant cards. Thus in one Fivondronon in the Faritany of Antananarivo, only half of 180 requests for collectors cards were granted by the authorities. Whether this has been happening in Fifabe is not known, but seems likely. The Vatoeka has a legal monopsony, derived from the internal regulations of the Fokotony. This means that if a collector has a card awarded to him by the authorities of the Fivondronon, he still needs approval of the Fokotony to operate in its area. One indication of the tendencies represented here is the report that in 1986 some Vatoeka tried to put up road barriers at the Fokotony level.

Several messages come out of these stories. The first confirms the view that the forces of competition have great power, even in raw markets heavy with imperfections and burdened by institutional obstacles to smooth market operation. Despite attempts by parastatals and local authorities to fix prices, limit entry, impose physical barriers to rice movements, and despite great uncertainty in the market due to volatile prices, incoherent regulations, risks of arbitrary regulatory acts, including confiscation--despite all this, the market worked.

21

Competition broke down the cartels, producer prices rose, producers responded intelligently to evolving market prices by refusing to sell early, and there seems to have been significant moves to increase production. Sharp, unprecedented rises in prices and rural incomes have pushed growers in text-book-like fashion to increase effort, reallocate factors, and buy new inputs. And this was so despite many systemic market weaknesses that prevent satisfaction of new demand for inputs and consumer goods.

Other messages are less cheerful. The triumph of 1986 is not only partial but it had high short-term human costs in terms of lower incomes and suffering by vulnerable groups. It also probably widened income and wealth differences within rural Madagascar. And--most relevant for the future of liberalization--the changed conditions are fragile. Propensities to limit competition are strong and widespread, emanating especially from the trading and rice producing parastatals and the local collectivities (collectivités décentralisées). Whether the anticompetition forces can be prevented from distorting and curtailing the reforms remains an open question. It will be difficult without a positive political and administrative commitment to maintenance of competition, a more explicitly "anti-trust" posture by the GDRM. As mentioned earlier, and as further noted below, there already exist proposals to bring private and public actors together to stifle competition.

VI. The Overall Reform Program: Elements of Fragility

Lack of Intellectual Support

The examples listed above of institutional and individual resistance to liberalization and to true competition illustrate one source of fragility of the reform program: conflict with established organizations and settled ways of doing things. But underlying this is perhaps a more basic factor: there exists in Madagascar very little intellectual support for the free market idea outside of the World Bank office and the U.S. Embassy. As noted earlier, most observers have always been skeptical of possible benefits, and they have not been converted by the results of 1986. Here are some examples.

- One recent paper says that the rice liberalization measures led to "wild speculation." It concedes that the producer benefits "in the short run," but small producers, who have no ability to store paddy, will have to buy rice on the free market during the soudure (end of 1986-early 1987), where prices could reach 1,000 FMG/kg. He continues:

It thus is not certain that the majority of producers will really benefit from the rise in prices, which only reflect the disorder prevailing on the market, where "liberalization" now means law of the jungle.

To increase production and revenues of rural people a price rise was necessary. But the conditions under which these rises have occurred are such that they will probably benefit only the middlemen and a few big and medium-sized landowners who have the capacity to store paddy until the next harvest.[8]

- Another 1986 paper, this one specifically on the rice sector, recognizes the rise in producer prices as a benefit, but stresses the bigger rise in consumer prices, and quotes with apparent approval the slogan, said to be popular in Tana: "liberalisation is the legalization of the black market."[9] The writer quietly doubts the priority and efficacy of liberalization. Can it, he asks, raise production when most output is autoconsumed, when credit facilities are absent, when there is no national, integrated rice market, and when the basic problem is really structural; it is not the result of 15 years of dirigism and disincentives, but rooted in inadequacies of the production system. He urges removal of the "real" constraints to production: better seeds, more pesticides, more fertilizer, more and better equipment. He also rebukes as imprudent the policy of cutting back drastically on imports before observing an increase in domestic production.

- The same evaluation exercise contains a thoughtful paper by Professor Phillipe Hugon, a long-time student of Madagascar's economy. Hugon admits that the rice reform has raised producer prices and squeezed out rents previously existing. But he criticizes the instability and market uncertainty it has brought, the dangerous import policies it urged, its anti-comparative advantage posture, and its misguided

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8. J. L. Martin, "Politique d'Ajustement Structurel au Madagascar," in République Française, Rapport de le Mission d'Evaluation, ibid., p. 43.

9. J. M. Yung, "Aperçus sur la Filière Riz à Madagascar," in République Française, Rapport de la Mission d'Evaluation, ibid., pp. 102ff.

79

priorities emphasizing marketing rather than production constraints. Two of his summary statements are worth quoting.

> The . . . (liberalization) measures assume that the economic environment allows the spread of change and that economic actors adjust rapidly. The destabilizing effects of liberalization are supposed to eliminate rents and bring into play mechanisms of competitive markets. But this is a theoretical construct. It neglects: rigidities and bottlenecks due to the inefficient system of production and limited intrasectoral linkages; delays in reactions of the actors; behavior that is atypical with possible perverse effects.

> The economic history of Madagascar (with respect to rice . . .) shows some long-term constraints: . . . inelasticity of production, vulnerability to climatic risks; weak transport and trading institutions. And in an economy of scarcity and instability, middlemen can by their speculative behavior increase scarcity and benefit from deregulation. State intervention is necessary. Government has to play its role of "watchman" (l'Etat Gendarme), guaranteeing the control of a buffer stock and regulating prices and the movement of commodities to avoid abuses.

- The new UNICEF report on Madagascar (draft, June 1987) is critical of numerous aspects of the adjustment program.[10] On the agricultural reform they say, first, that the peasants are even worse off than during the colonial period, when the administration guaranteed input supply and controlled producer prices. From 1982-1985, producer prices have been down or stagnant for almost all crops. Secondly, "transactions between the peasant, even rich, and the collector-trader most often favor the latter, who is also often a moneylender. The favorable immediate effects of liberalization could then be quickly blocked." They therefore recommend subsidies to small rural credit schemes, floor prices for producers, and encouragement of peasant associations to balance inequalities in power. They also recommend that MPARA continue to be responsible for input supply and should regulate markets for other commodities via buffer stocks. They

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10. UNICEF, Impact du Programme d'Ajustement Structurel sur les Ménages Défavorisés (Antananarivo, June 1987, draft).

urge also that price controls be imposed in the form of fixed floor prices and guaranteed FOB prices for export crops, with the Caisse de Stabilisation being retained.[11]

o An informal note (origin unclear), entitled "Note sur la Commercialisation du Paddy a Lac Alaotra (May 1987) comments that the "controlled" marketings--i.e., those by public and private agents obliged to declare their purchases--were only about 60,000 tons in 1986 and were among the lowest of the past 20 years. The authors then observe that while the competitive pushing up of producer prices in 1986 undoubtedly benefitted producers, "one can ask whether this surge in prices will not also have negative consequences for Lac Alaotra." Input and land prices have risen sharply in 1986/87. (The wage rise is not mentioned.) Also, the coming decline in revenues (because 1987 prices will be lower than those of 1986) will compromise peasant plans for intensification of production. High prices hurt SOMALAC's financial position. Competition will also lead to greater interannual price fluctuations, which, it is asserted, will have highly negative incentive effects; if producers can't cover their costs or maintain real purchasing power they will not increase output. "All of SOMALAC's work since 1983 will be compromised."

The authors propose a new organizational approach to the marketing of the rice of Lac Alaotra.

> If it is acknowledged that price stability and guaranteed purchase are essential for producers, a return to an organized approach to marketing can be envisaged beginning in 1988. This will better

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11. The UNICEF writers also criticize industrial policy. They oppose devaluation as being too general an instrument; they are skeptical of privatization, and of the export emphasis which they see as in conflict with the more important food self-sufficiency objective. They want to maintain price controls on basic goods (PPN) and on those produced by monopolies such as flour, candles and paper. They favor ex-post controls on many prices, such as transport. On the key issue of fiscal restraint they appear to be critical of the policies used up to now (not passing benefits of devaluation to exporters, real wage cuts, reductions in real expenditures on capital and current account. But their only positive proposals are for better tax collection and reduction in number of ministries and cutbacks in public employment.

> utilize milling capacity in the Lac, reduce costs and sustain the dynamism observable among the peasants in recent years. . . .
>
> On the basis of a paddy price fixed at the beginning of the 1987/88 crop year, the purchase of the crop could be done exclusively by the public and private millers to whom purchasing zones would be allocated so as to minimize costs of transport. Financing would be provided, as in the past, by the BTM on the basis of crop forecasts. . . . The prohibition of non-milled paddy exports would have to be reintroduced and monitored by the local authorities. Operators participating in buying operations would have to declare their purchases, sales and inventories. Such a structure would require a minimum of agreement among the public and private partners involved in buying and processing paddy. It would avoid a return to monopoly, (but). . . would require a coordinating authority with power to fix prices, allocate zones and arbitrate differences.

In other words, barely one year into the full liberalization program, proposals for its fundamental revision are being floated. This one involves a cartel pure and simple, with implicit restrictions on entry and movement controls, and with price fixing based on that dubious but apparently unkillable notion of "cost of production." Its basic proposition--that price instability is harmful for production growth--is debatable, to say the least. In the Madagascar case one can argue the contrary: that farmers can handle instability of prices better than governments or parastatals, and that the shock of record-breaking prices and unparalleled increases in income can excite previously lethargic producers to new undertakings by causing basic changes in expectations.

The chilly appraisals of the results of rice market liberalization, and the appearance of *dirigiste* alternatives, are examples of the main point being made here: that liberalization and the efficacy of competitive markets still lack intellectual or doctrinal credibility. This is observable with respect to other aspects of the reform program. In transport, for example, most officials, and many of the transport operators themselves, believe that market liberalization leads to irrational and unsound behavior. The Minister of Transport expressed a view widely held in the industry when he said at a 1987 seminar:

> Recently, transport operations have been substantially changed. Competition between transporters has become

32

> anarchic, to an extent unforeseen by the partisans of liberalization. The expected results have not been achieved, at least not yet. If I can talk the way economists do, I would say that "perverse effects" have occurred, in the sense that they run counter to those that were expected. The conditions under which available equipment is operated, and the present weakness of demand for transport leads me to think that the free play of market forces has had only one benefit--to push transport tariffs very low, which is no real advantage except in the very short run, since these tariffs don't allow amortisation of capital and repayment of interest.[12]

Hard evidence on transporter behavior is sparse. The behavior imputed to truck owners may not be prevalent, may be rational if prevalent, and/or may be due to short-term overinvestment. The low transport costs it generates have positive effects throughout the economy, in any case. Given a little time, such behavior, if it exists to any extent and is truly irrational, will give way to more informed tariff-setting and changes in investment behavior. However, the threshold of intellectual tolerance for these putative defects of free markets is so low that re-regulators, waiting in the wings, immediately try to seize on them as excuses to retreat on liberalization. Underneath it all is the deep-rooted doubt that competitive markets are a good thing.

The "Imposed" Nature of the Reforms

Other sources of fragility in the reform program derive from the fact that they are seen by almost everybody as being imposed on Madagascar by the Bretton Woods institutions. This view has been expressed openly by President Ratsiraka and others, from ministers on down.

The problem is exacerbated by what is said to be the confrontational style of Bank and Fund staff. A number of officials characterize the Bank approach as "take it or leave it." One result is that efforts to inform even key segments of Madagascar's political and intellectual elites about the rationale for the reforms, or to debate objections, are extremely few. The level of information about the specific elements of the reform program are often known only to a few officials. Even high civil servants and political personalities, for example, were unaware of what the CASPIC credit entailed.

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12. GDRM, Ministère des Transports, de la Météorologie et du Tourisme, Sèminaire Relatif au Plan National de Transport, Antananarivo, 4 au 8 mai, 1987, Allocation d'Ouverture, p.11.

USAID, by its effort in January 1986, did address this problem. It can do more, as can other bilaterals. But changes in the way the Fund and the Bank do business are needed for any real impact. Systematic public education is a feature of Bank adjustment efforts in some countries. It needs doing in Madagascar. Less confrontational negotiating styles would also be beneficial, and new channels should be sought for expanding debate on the substance of the reforms and on the nature of their intellectual foundations. This kind of debate can only be fruitful if it is divorced from issues of performance on policy loans. This gives bilaterals like USAID some special opportunities. And it calls for ingenuity, especially by World Bank staff, in finding credible forums to sponsor debate and true dialogue.

Nonperformance and Unresolved Issues

We have accented the many forward steps taken by the Malagasy authorities to implement the adjustment program. But some parts of the program have not been implemented. For example, agreed levels of rice imports were exceeded in both 1985 and 1986. And the 1987 agreement with the Soviet Union to import 160,000 tons of rice suggests that 1987 imports will also be larger than agreed. The fact that 1988 is an election year is an added reason to expect continued pressure for more rice imports, for lower prices and greater distribution through the official distribution system. The uncertainty that prevailed in mid-1987 as to the opening (1987-1988) buffer stock price (340 or 460) is another indicator of potential disagreement.

In addition, all the issues of the nonviable industrial projects remain to be resolved. Reluctance to close Mamisoa is illustrative. And propensities to adopt projects of dubious economic merit, which Bank/Fund staff try to stop, continue to create friction between the Bank/Fund and local authorities.

All of this, combined with continuing slow growth of exports, sluggish growth of output in general and continuing burdens of debt service, creates an environment of some volatility. So while remarkable successes can be seen in the Malagasy adjustment story, it is much too early to cry victory.

ANNEX TABLES

TABLE A-1

OFFICIAL MINIMUM WAGE RATE, Money and Real, 1974-1986

YEARS	Consumer Price Index— Traditional Basket	SMIG			SMAG		
		Nominal	Index Nominal	Index Real	Nominal	Index Nominal	Index Real
1964	86	NA	NA	NA	NA	NA	NA
1965	89	NA	NA	NA	NA	NA	NA
1966	92	NA	NA	NA	NA	NA	NA
1967	93	NA	NA	NA	NA	NA	NA
1968	94	NA	NA	NA	NA	NA	NA
1969	91	NA	NA	NA	NA	NA	NA
1970	100	NA	NA	NA	NA	NA	NA
1971	106	NA	NA	NA	NA	NA	NA
1972	111	NA	NA	NA	NA	NA	NA
1973	118	NA	NA	NA	NA	NA	NA
1974	144	8839	100.0	100.0	8600	100.0	100.3
1975	156	8839	100.0	92.3	8600	100.0	92.6
1976	165	8839	100.0	87.3	8600	100.0	87.6
1977	169	8839	100.0	85.2	8600	100.0	85.5
1978	180	9625	108.9	87.1	9667	112.4	90.2
1979	205	10118	114.5	80.4	10200	118.6	83.6
1980	243	10877	123.1	72.9	11025	128.2	76.2
1981	308	13038	147.5	69.0	13275	154.4	72.4
1982	406	14742	166.8	59.2	15200	176.7	62.9
1983	462	15591	176.4	55.0	16200	188.4	58.9
1984	504	17369	196.5	56.1	18000	209.3	60.0
1985	552	19000	215.0	56.1	19500	226.7	59.4
1986	623						

SMIG: Urban Legal Minimum Wage;
SMAG: Agricultural Legal Minimum Wage.

TABLE A-2

CENTRAL GOVERNMENT SALARY SCALES (RATES), 1979-1987
Thousands of Malagasy Francs per month

NOMINAL SALARY SCALES (1)

CATEGORY	1979(2)	1980	1981	1982	1983	1984	1985	1986
1	34.2	34.2	35.1	36.2	36.7	39.0	41.2	43.1
2	45.7	45.7	46.9	48.3	49.0	52.2	54.6	56.8
3	65.9	65.9	67.6	69.3	70.1	75.2	78.0	80.4
4-5	96.5	96.5	98.9	101.8	103.3	110.0	113.9	117.2
6-7	112.7	112.7	115.6	119.0	120.8	128.6	133.0	136.9
8-9	141.9	141.9	145.5	149.9	152.1	161.9	165.3	168.0
*Average (total)(3)	59.8	59.8	61.3	63.1	64.0	68.2	70.9	73.4
*Average (1&2)	42.2	42.2	43.3	44.6	45.3	48.2	50.5	52.6
*Consumer Price Index-Traditional Basket	100	118.5	150.2	198.0	225.4	245.9	269.3	303.9

INDICES OF REAL SALARY SCALES

CATEGORY	1979	1980	1981	1982	1983	1984	1985	1986
1	100.0	66.6	68.3	53.4	47.6	46.4	44.7	41.5
2	100.0	66.6	68.3	53.4	47.6	46.5	44.4	40.9
3	100.0	66.6	68.2	53.1	47.2	46.4	43.9	40.2
4-5	100.0	66.6	68.2	53.3	47.5	46.4	43.8	40.0
6-7	100.0	66.6	68.2	53.3	47.6	46.4	43.8	40.0
8-9	100.0	66.6	68.2	53.3	47.6	46.4	43.3	39.0

	1979	1980	1981	1982	1983	1984	1985	1986
1)All cat	100.0	84.4	68.3	53.3	47.5	46.4	44.1	40.4
2)Cat.1&2	100.0	84.4	68.3	53.4	47.6	46.5	44.4	41.0
3)Cat.8-9	100.0	66.6	68.2	53.3	47.6	46.4	43.3	39.0

(1) Annual averages, from I.M.F.,R.E.D., March 1987
(2) August-December
(3) weighted by employment in Sept.1985. The following are the employment figures and corresponding weights:

Category	(000)	Relative Weight
1	15.6	0.2
2	35.8	0.4
3	13.7	0.2
4-5	14.1	0.2
6-7	3.5	0.0
8-9	1.4	0.0
Total	84.1	

TABLE A-3
Average Salary in the Fonction Publique, 1964-1986

YEARS	Civil Service Employment (Thousands)	Civil Service Wage Bill (monthly, Bns. FMG)	Average monthly Salary (000's of FMG)	Consumer Price Index	Index of Real Sal. (1970=100)
1964	27.4	11.4	416.0	83.7	115.6
1965	28.9	12.9	446.0	86.8	119.5
1966	30.1	13.2	434.0	89.5	112.8
1967	31.5	14.1	448.0	90.6	115.0
1968	33.3	15.1	454.0	91.8	115.0
1969	34.8	16.9	486.0	96.7	116.9
1970	35.8	15.4	430.0	100.0	100.0
1971	37.0	16.8	454.0	105.6	100.0
1972	37.7	17.9	479.0	111.7	99.7
1973	46.7	24.0	514.0	112.4	106.3
1974	50.1	27.0	539.0	141.0	88.9
1975	50.1	29.2	539.0	153.0	81.9
1976	58.0	37.7	650.0	163.0	92.7
1977	58.0	35.6	650.0	170.0	88.9
1978	58.0	48.2	650.0	182.0	83.1
1979	70.0	50.4	720.0	206.0	81.3
1980	76.0	54.5	783.0	241.0	75.6
1981	81.0	68.0	840.0	304.0	64.3
1982	83.0	80.7	972.0	404.0	56.0
1983	84.0	81.9	975.0	457.0	49.6
1984	85.0	92.0	1082.0	501.0	50.2
1985	85.0	100.6	1184.0	551.0	50.0
1986	85.0	109.0	1282.0	623.0	47.9

Sources: 1964-1985: UNICEF Report, 1987;
1986: IMF, RED, March 1987.

TABLE A-4

Commodity Prices 1965 to 1987

Malagasy Francs per Kilogram

	Paddy	Pois De Cap	Arachides	Tabac	Coton	Cafe	Poivre	Vanille Verte	Girofle	Sisale
64/65	NA	NA	NA	NA	NA	110.0	NA	175.0	115.0	NA
65/66	13.0	20.0	27.0	214.0	NA	100.0	170.0	185.0	110.0	40.0
66/67	13.0	20.0	27.0	129.0	NA	105.0	140.0	130.0	110.0	76.0
67/68	13.0	22.0	24.0	111.0	NA	105.0	120.0	150.0	110.0	30.0
68/69	14.0	25.0	24.0	105.0	NA	105.0	100.0	170.0	250.0	35.0
69/70	14.0	30.0	24.0	123.0	46.0	135.0	125.0	190.0	250.0	34.0
70/71	15.0	30.0	27.0	114.0	58.0	139.0	150.0	220.0	275.0	34.0
71/72	15.0	30.0	28.0	121.0	58.0	135.0	150.0	220.0	280.0	31.0
72/73	15.0	35.0	29.0	119.0	60.0	135.0	150.0	220.0	280.0	60.0
73/74	25.0	37.0	35.0	126.0	68.0	165.0	175.0	240.0	230.0	74.0
74/75	30.0	38.0	41.0	140.0	78.0	165.0	175.0	240.0	320.0	81.0
75/76	30.0	40.0	41.0	140.0	78.0	165.0	180.0	250.0	320.0	65.0
76/77	35.0	45.0	45.0	160.0	80.0	180.0	150.0	280.0	340.0	74.0
77/78	35.0	48.0	48.0	160.0	80.0	183.0	195.0	305.0	340.0	74.0
78/79	39.0	55.0	45.0	174.0	86.0	185.0	200.0	500.0	385.0	84.0
79/80	39.0	55.0	45.0	174.0	86.0	185.0	200.0	500.0	385.0	84.0
80/81	43.0	68.0	55.0	191.0	90.0	215.0	225.0	600.0	395.0	86.0
81/82	47.0	75.0	65.0	210.0	100.0	250.0	225.0	700.0	430.0	140.0
82/83	60.0	80.0	80.0	231.0	126.0	260.0	230.0	700.0	435.0	150.0
83/84	65.0	80.0	80.0	231.0	155.0	280.0	230.0	1000.0	435.0	150.0
84/85	75.0	NA	80.0	NA	240.0	330.0	255.0	1000.0	435.0	NA
85/86	83.0	NA	NA	NA	NA	395.0	300.0	1000.0	435.0	NA
86/87	100.0	NA	NA	NA	NA	600.0	800.0	1100.0	525.0	NA

Source: 1964-1985: UNICEF Report, 1987;
1986-87: IMF, RED, March 1987.

TABLE A-5

INDICES OF REAL PRODUCER PRICES (1970=100) (1)

	Paddy	Pois De Cap	Arachides	Tabac	Coton	Cafe	Poivre	Vanille Verte	Girofle	Sisale
64/65	NA	NA	NA	NA	NA	91.6	NA	103.5	51.7	NA
65/66	100.9	72.5	122.3	189.1	NA	80.5	147.8	105.8	47.8	127.9
66/67	99.8	71.7	121.0	112.8	NA	83.6	120.4	73.6	47.3	240.4
67/68	98.8	78.0	106.4	96.0	NA	82.7	102.1	84.0	46.8	93.9
68/69	109.9	91.6	109.9	93.8	NA	85.5	87.9	98.3	109.9	113.1
69/70	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
70/71	101.1	94.3	106.1	87.1	118.9	97.1	113.2	109.2	103.8	94.3
71/72	96.5	90.1	105.1	88.6	113.6	90.1	108.1	104.3	100.9	82.1
72/73	90.8	98.9	102.4	82.0	110.5	84.7	101.7	98.1	94.9	149.6
73/74	124.0	85.6	101.3	71.1	102.7	84.9	97.2	87.7	63.9	151.1
74/75	137.4	81.2	109.5	73.0	108.7	78.3	89.7	81.0	82.1	152.7
75/76	129.9	80.8	103.5	69.0	102.8	74.1	87.3	79.7	77.6	115.9
76/77	147.9	88.8	110.9	77.0	102.9	78.9	89.9	87.2	80.5	128.8
77/78	138.9	88.9	111.1	72.3	96.6	75.3	86.7	89.2	75.6	120.9
78/79	135.9	89.4	91.5	69.0	91.2	66.8	78.0	128.4	75.1	120.5
79/80	114.6	75.4	77.2	58.2	76.9	56.4	65.8	108.3	63.4	101.7
80/81	99.7	73.6	74.4	50.4	63.5	51.7	58.4	102.5	51.3	82.1
81/82	82.7	61.6	66.7	42.1	53.5	45.6	44.3	90.7	42.4	101.4
82/83	92.8	57.7	72.2	40.7	59.3	41.7	39.8	79.7	37.7	95.5
83/84	92.1	52.9	66.1	37.3	66.9	41.2	36.5	104.4	34.5	87.5
84/85	97.0	NA	60.4	NA	94.5	44.3	37.0	95.3	31.5	NA
85/86	95.2	NA	NA	NA	NA	47.0	38.5	84.5	27.9	NA
86/87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ANNUAL GROWTH RATES (2)

66/70	-0.2	8.4	-4.9	-14.7	NA	5.6	-9.3	-1.4	20.2	-6.0
71/75	8.0	-3.7	0.8	-4.4	-2.2	-5.2	-5.6	-7.2	-5.7	12.8
76/80	-3.1	-1.7	-7.1	-4.2	-7.0	-6.6	-6.8	8.0	-4.9	-3.2
81/86(2)	-0.9	-10.4	-5.1	-9.6	10.4	-1.9	-8.0	-3.8	-11.4	2.1

(1) Nominal official producer prices deflated by traditional basket based consumer price index.
(2) 1980/81 to 1985/86 for paddy, coffee, pepper, vanilla and clones. For other crops, 1980/81 to latest year available.

Source: 1964-1985: UNICEF Report, 1987;
1986: IMF, RED, March 1987.

40

TABLE A-6

Official Producer Price and Weighted Producer Price of Export Crops

NOMINAL PRICES	Cafe	Poivre	Vanille Verte	Girofle	Sisale	*	Weighted Index of official Producer Prices of exp. crops(1)
64/65	110.0	NA	175.0	115.0	NA	*	NA
65/66	100.0	170.0	185.0	110.0	40.0	*	120.5
66/67	105.0	140.0	130.0	110.0	76.0	*	111.4
67/68	105.0	120.0	150.0	110.0	30.0	*	114.3
68/69	105.0	100.0	170.0	250.0	35.0	*	151.2
69/70	135.0	125.0	190.0	250.0	34.0	*	171.1
70/71	139.0	150.0	220.0	275.0	34.0	*	185.9
71/72	135.0	150.0	220.0	280.0	31.0	*	185.0
72/73	135.0	150.0	220.0	280.0	60.0	*	185.8
73/74	165.0	175.0	240.0	230.0	74.0	*	194.4
74/75	165.0	175.0	240.0	320.0	81.0	*	215.6
75/76	165.0	180.0	250.0	320.0	65.0	*	217.4
76/77	180.0	190.0	280.0	340.0	74.0	*	236.7
77/78	183.0	195.0	305.0	340.0	74.0	*	243.8
78/79	185.0	200.0	500.0	385.0	84.0	*	298.5
79/80	185.0	200.0	500.0	385.0	84.0	*	298.5
80/81	215.0	225.0	600.0	395.0	86.0	*	338.4
81/82	250.0	225.0	700.0	430.0	140.0	*	387.7
82/83	260.0	230.0	700.0	435.0	150.0	*	394.2
83/84	280.0	230.0	1000.0	435.0	150.0	*	470.3
84/85	330.0	255.0	1000.0	435.0	NA	*	NA

(1) The weighting is derived as follows:

Production:

	Cafe	Poivre	Vanille Verte	Girofle	Sisale	*	TOTAL
1981	94.7	2.9	23.4	55.3	5.3	*	181.6
1982	84.9	2.5	42.4	60.8	5.7	*	196.3
1983	106.0	3.1	58.4	15.5	3.7	*	186.6
Average 81/83	95.2	2.8	41.4	43.9	4.9	*	188.2
WEIGHT Av./tot	0.51	0.01	0.22	0.23	0.03	*	

TABLE A-7

Relative Prices: Wage Labor, Food and Export Crops

Years	Official Price Ratios (1)				Index of Official Price Ratios (1980=100) (2)			
	SMIG/PAD	COFF/PAD	SMIG/EXP	EXP/PADDY	SMIG/PAD	COFF/PAD	SMIG/EXP	EXP/PADDY
64/65	NA	NA	NA	NA	NA	NA	NA	NA
65/66	NA	7.7	NA	9.3	NA	162.2	NA	121.1
66/67	NA	8.1	NA	8.6	NA	170.3	NA	112.0
67/68	NA	8.1	NA	8.8	NA	170.3	NA	114.9
68/69	NA	7.5	NA	10.8	NA	158.1	NA	141.1
69/70	NA	9.6	NA	12.2	NA	203.3	NA	159.7
70/71	NA	9.3	NA	12.4	NA	195.4	NA	162.0
71/72	NA	9.0	NA	12.3	NA	189.7	NA	161.1
72/73	NA	9.0	NA	12.4	NA	169.7	NA	161.8
73/74	NA	6.6	45.5	7.8	NA	139.1	124.8	101.6
74/75	294.6	5.5	41.0	7.2	113.6	115.9	112.5	93.9
75/76	294.6	5.5	40.7	7.2	113.6	115.9	111.6	94.7
76/77	252.5	5.1	37.3	6.8	97.3	108.4	102.5	88.4
77/78	252.5	5.2	39.5	7.0	97.3	110.2	108.4	91.0
78/79	246.8	4.7	33.9	7.7	95.1	100.0	93.0	100.0
79/80	259.4	4.7	36.4	7.7	100.0	100.0	100.0	100.0
80/81	253.0	5.0	38.5	7.9	97.5	105.4	105.7	102.8
81/82	277.4	5.3	38.0	8.2	106.9	112.1	104.3	107.8
82/83	245.7	4.3	39.5	6.6	94.7	91.4	108.5	85.9
83/84	239.9	4.3	36.9	7.2	92.5	90.8	101.3	94.5
84/85	231.6	4.4	NA	NA	89.3	92.8	NA	NA

Years	Index of Price Ratios (1975=100) (3)			
	SMIG/PAD	COFF/PAD	SMIG/EXP	EXP/PADDY
64/65	NA	NA	NA	NA
65/66	NA	139.9	NA	129.0
66/67	NA	146.9	NA	119.3
67/68	NA	146.9	NA	122.4
68/69	NA	136.4	NA	150.3
69/70	NA	175.3	NA	170.1
70/71	NA	168.5	NA	172.5
71/72	NA	163.6	NA	171.6
72/73	NA	163.6	NA	172.3
73/74	NA	120.0	110.9	108.2
74/75	100.0	100.0	100.0	100.0
75/76	100.0	100.0	99.1	100.9
76/77	85.7	93.5	91.1	94.1
77/78	85.7	95.1	96.3	96.9
78/79	83.8	86.2	82.7	106.5
79/80	88.1	86.2	88.9	106.5
80/81	85.9	90.9	94.0	109.5
81/82	94.2	96.7	92.7	114.8
82/83	83.4	78.8	96.5	91.4
83/84	81.4	78.3	90.1	100.7
84/85	78.6	80.0	NA	N

(1) Ratio of the weighted index of major export crops (Table 6) to official producer prices (or to SMIG).

(2) Indices of the official price ratios (see (1) above) using 1980 as a base year.

(3) Indices of the official price ratios (see (1) above) using 1975 as a base year.

Several indices were calculated because of problems caused by missing data.