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STRUCTURAL ADJUSTMENT
AND MOROCCAN AGRICULTURE:
AN ASSESSMENT OF THE REFORMS
IN THE SUGAR AND CEREAL SECTORS

by

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by

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COMMONLY USED ABBREVIATIONS

ASAL	Agricultural Sector Adjustment Loan
ASAP	Agricultural Sector Adjustment Programme
EFF	Extended Fund Facility
GATT	General Agreement on Tariff and Trade
IMF	International Monetary Fund
INRA	Institut National pour la Recherche Agronomique
ITPAL	Industrial and Trade Policy Adjustment Loan
ITPAP	Industrial and Trade Policy Adjustment Programme
MARA	Ministère de l'Agriculture et de la Réforme Agraire
MTASAP	Medium-Term Agricultural Sector Adjustment Programme
OCE	Office de Commercialisation et d'Exportation
ONICL	Office National Interprofessionnel des Céréales et des Légumineuses
ONTS	Office National du Thé et du Sucre
ORMVA	Office Regional de Mise en Valeur Agricole
PAGI	Projet d'Amélioration de la Grande Irrigation
SIT	Special Import Tax

BASIC DATA ON MOROCCO

Sources: World Bank publication - *Trends in Developing Economies, 1990*
 IMF publications - *International Financial Statistics*;
 Figures are given for 1988 (unless otherwise stated)

Population

Total population: 24 million
 Urban population: 11.5 million (48%)
 Rural population: 12.5 million (52%)

Land and agriculture

Arable land: 8.3 million Ha (11.7% of total land)
 Irrigated land: 1.2 million Ha

Production of the agricultural sector: see table below

	% of total production value	% produced in irrigated land	% produced in rainfed land
Cereals	32.9	3	29.9
Animal production	32.6	13	19.6
Horticulture/vegetable	11	5.5	5.5
Citrus	10.9	5.5	5.4
Fodder	1.8	0.9	0.9
Sugar crops	2.2	1.6	0.6
Oilseed crops	2.1	0.5	1.6
Pulses	3.6	-	3.6
Forest	2.9	-	2.9
Total	100%	30%	70%

Source: Qarouach, 1987, p16 (op cité)

National Income and Balance of Payments

GNP/capita: (88) US\$ 830
 GNP: 166,600 million DH (1987 constant prices)
 GDP: 174,300 million DH (1987 constant prices)
 Imports of Goods & Services: 5,518 million DH
 Exports of Goods & Services: 5,445 million DH

Exchange Rate

Official Exchange Rate: DH/US\$

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
5.53	6.21	6.91	8.44	9.36	10.57	10.66	11.07	11.05	10.67	11.44

ABSTRACT

This paper reviews the process of agricultural policy reforms in Morocco in the 1980's, with particular emphasis on the cereals and sugar sub-sectors.

Agricultural policy is reviewed in historical perspective, to show that the liberalisation process which was proposed in the framework of structural adjustment reforms ran contrary to the agricultural development strategy followed by Morocco since Independence.

The macro-economic performance of Morocco is examined. It shows that the origin of the economic policy reforms can be found in the necessity to seek balance of payment support. This led from a series of orthodox stabilisation measures to a process of liberalisation and structural adjustment which has affected a certain number of sectors including agriculture.

The history of proposals for agricultural reforms is outlined and the extent of actual implementation is discussed. The adequacy of policy instruments and the impact of reforms are reviewed in a more detailed form for the cereals and sugar sub-sectors. The effects of the reform process on poverty are discussed, and the content of compensatory programmes is considered.

Conclusions cover: the political economy of reforms; efficiency and distribution and poverty effects; World Bank's contribution to reforms; various technical issues concerning the appropriateness of policy instruments.

INTRODUCTION

Since 1983, Morocco has undertaken a series of stabilisation and adjustment programmes, supported by IMF financing facilities and by World Bank structural adjustment loans. Together, these amounted to a total of more than one billion US\$.

At the macroeconomic level, adjustment reforms have involved a steady devaluation of the Dirham, measures of trade liberalisation, a restructuring of the tax system and reduction of the state participation in the economy. At the sectoral level, the agriculture has been the focus of series of policy-based loans: two sectoral adjustment loans, the first in 1985 for US\$100 million and the second in 1987 for US\$225 million and other loans addressing particular parts of the agricultural sector, notably irrigation¹.

The general objectives of the changes in agricultural policy promoted by the World Bank have been reduction in the budgetary costs of market interventions; growth of exports; greater allocative efficiency (this by reducing the imbalance in policy support as between rainfed and irrigated farming and by encouraging the production of crops with a competitive advantage); and improvement in income distribution (in particular by targeting the ultra-poor).

In practice, the World Bank's proposals for the restructuring of the Moroccan agricultural sector have been orthodox and fairly similar to reform programs undertaken in other developing countries: cuts in subsidies; reduction of investment programmes and the reorientation of these away from heavily protected components of the agricultural sector; liberalisation of agricultural and food pricing and marketing; and privatisation of technical and commercial services performed by parastatals.

As this paper shows, implementation of the agreed reforms has been uneven and characterised by delays. This calls into question the technical validity of some of the policy prescriptions, the government's commitment to liberalisation and the World Bank's capacity for obtaining compliance. This paper provides an analysis of the reform process for two important components of the agricultural sector, sugar and cereals. Through these two case studies, the paper highlights specific issues of adjustment and reform implementation in the Moroccan agricultural sector and assesses the impact of World Bank intervention on agriculture's performance.

1 For example, the Loan for the Promotion and Rehabilitation of Large Scale Irrigation - *Projet d'Amélioration de la Grande Irrigation (PAGI)*, Loan IBRD 2656-MOR.

INTRODUCTION: HISTORICAL PERSPECTIVE

Agricultural policies under the Protectorate (up to 1957)

Colonial agricultural policies were characterised by a high level of state intervention, aimed at promoting a modern agricultural sector dominated by settlers producing export crops geared to the French market. Up to the Second World War, emphasis was given to the development of cereal production by settlers for export to France, this encouraged by price supports, direct and indirect subsidies, and preferential access to the French market. According to Swearingen (1986), cereal policy was based on the belief of the French government that Morocco could resume the role it had played in Antiquity as "the granary of Rome". In the event, wheat yields were low and Moroccan wheat was not competitive in the world market. Thus cereal support measures were abandoned after the war and, as El Khyari (1987) has demonstrated, a structural cereal deficit began to emerge in the late colonial period.

In the early 1950s, the "Californian model" of fruit production under modern irrigation techniques was introduced, with a fair degree of success. The area planted to citrus expanded from 1600 ha in 1930 to 42000 ha in 1955. Tomato exports grew seven-fold between 1932 and 1945. Citrus proved both financially profitable and politically attractive: Moroccan production supplied the French market with cheap products, which, for reasons of timing, did not compete directly with the French production. Moreover, much of the value-added was repatriated to France by the settlers (Swearingen, 1986).

The case of sugar was different: although, since the early 1930s, it had been acknowledged that Morocco could achieve high yields in sugarbeet and that domestic demand for sugar was adequate to justify investment in mills and refineries, the development of a Moroccan sugar industry challenged the interests of French sugar producers. The French sugar producers' lobby proved sufficiently persuasive to ensure that, at Independence, sugar production was insignificant.

During the Protectorate, large scale public irrigation programmes were undertaken. These were first intended for the settlers but, from the 1930s, also began to be considered as a means of alleviating peasant poverty and demonstrating the commitment of France to the economic development of Morocco. Demand for irrigation was reinforced by the expansion of fruit crops. An ambitious programme, was launched in 1938 to increase the irrigated area to one million hectares by the end of the century, but progress towards this objective was setback by the Second World War.

The inheritance of the colonial policy was a dualistic agriculture which posed a challenge for the post-Independence government (El Khyari, 1987, p 213; Swearingen 1986, p149; Tully 1990). Settler agriculture, which was capital intensive, mechanised and, often, irrigated contrasted starkly to traditional peasant farming, distinguished by low yields, little use of purchased inputs, poor access to markets and high exposure to climatic risk. Since Independence there has been intensification in the better favoured zones of peasant rainfed farming, and some public irrigation schemes have incorporated small-scale farmers, nevertheless, contemporary agriculture retains

dualistic features. There has been little change in the tenurial system, only limited land reform and little change in farming methods or incomes in the drier, poorer zones of peasant farming.

Agricultural policies from Independence to the commencement of reform (1957 to 1984)

After Independence, Morocco faced a series of social and political challenges which undermined prospects of rapid economic growth². It adopted an economic strategy characterised by Seddon (1989, p234) as a "weak form of state capitalism", maintaining free markets and private ownership of capital, but within a context of a highly interventionist policy aimed at transferring ownership to Moroccans and protecting import-substituting production. At Independence, agriculture was the key productive sector, and thus was the focus of much state intervention. According to the 1960 five-year plan³, the goals of agricultural were:

objectif de production: to raise self-sufficiency rate in staple foods, by encouraging the production of import substitutes (cereals, sugar, edible oil);

objectif des équilibres fondamentaux: to promote agricultural exports to allow for expansion in capacity to import;

objectif répartition: to reduce social and regional inequalities;

objectif de développement industriel: to capture more value added by integrating agriculture to the industrial sector;

State intervention in agriculture was based on a mix of market interventions and public sector investment (strongly focused on irrigation). After largely unsuccessful programmes to modernise the traditional sector (e.g. *Operation Labour* from 1957 to 1961⁴), the government gave a new impulse to the irrigation programme which had been initiated during the Protectorate. The *politique des barrages*⁵ was launched in 1968, reaffirming what had been the goal of the Protectorate administration of one

2 The immediate issues faced by the post-Independence government were: capital flight (repatriated by the settlers); the small size of the elite and intra-elite rivalries which hampered democratization (Miège, 1986); the take-over of settler farms by members of the economic and political elite who were able to slow down the process of land reform, consequently undermining the prospects of development of the peasant agriculture (El Khyari 1987).

3 *Plan d'Orientation pour le Développement Economique et Social*: these plans are designed by the Ministry of Planning, and they state the general orientation of state policy for the next three years (*plan triennal*) or five years (*plan quinquennal*), and set out indicative targets. Since Independence, there have been nine Plans: 1958-1959, 1960-1964, 1965-1967, 1968-1972, 1973-1977, 1978-1980, 1981-1985, 1986-1988, 1988-1992) .

4 The objective of *Operation Labour* was to modernise the traditional sector by introducing tractorisation and inorganic fertiliser. Ploughing services were to be provided to farmers at low costs and fertiliser free of charge. However, this program was poorly adapted to the peasants' needs (Swearingen 1986), was very costly and had disappointing results. It was abandoned in 1961.

5 An ambitious program of dam construction to expand the large-scale irrigation sector.

million hectares under irrigation. From 1968 to 1975, over 40% of government spending on agriculture was devoted to capital investment in large scale irrigation (Qarouach, 1987, p44).

The post-Independence government reinforced the system of price intervention by measures designed to stimulate supply without increasing consumer prices. In essence, the objectives were threefold: first, to maintain low food prices in order to control wage inflation and thus to accelerate the industrialisation process; second, to insulate the economy from fluctuations in the prices of agricultural commodities in international markets, thereby achieving greater price stability for producers and consumers; and, third, to make it financially attractive to expand production of the import substituting crops, notably soft wheat and sugar. A rigid institutional structure of marketing and processing was enforced for certain products (cereals, sugar, oilseeds and to a lesser extent citrus and vegetables) and for key inputs (fertiliser and seeds). The structure was based on public and private monopolies; controls over imports; fixing of key input and output prices; and subsidies to farmers, marketing organisations, processors and consumers.

Growth performance

Agriculture has, until recently, been the most important sector of the Moroccan economy. In 1965-70, it employed 58% of the working population and contributed 21% of GDP. However, in the last two decades, the share of the agricultural sector in the GDP has been in rapid decline (see Figure 1). Although a decrease in the relative importance of agriculture is an expected result of economic development, the sharpness of the decline of the last two decades is, to some extent, a reflection of a disappointing growth performance by the agricultural sector.

From Independence until the later 1960s, the agricultural sector grew slowly, after which it exhibited a phase of rapid growth sustained by investment in irrigation, which ended in the early 1970s⁶. From 1973 followed a period of stagnation, this tipping over into a decline in the first half of the 1980s. The agricultural trade balance began to deteriorate from 1973, remaining negative between 1975 and 1986 (see Figure 2), although agriculture remained the major source of employment in the economy. It has to be emphasised that a fundamental influence on the performance of agriculture in the 1970s and early 1980s was poor rainfall (drought in 7 out of 14 years). The clear improvement of the second half of the 1980s owes much to the return of more favourable weather.

The hazardous climate faced by Moroccan agriculture, and the acute sensitivity of rainfed agriculture to rainfall variation, obscure the effects of policy, as the year-on-year impact on production of policy change can be swamped by seasonal factors. However, the feeble performance of agriculture has not been entirely due to factors outside the government's control. In going beyond explanations of agricultural performance based on rainfall, a starting point is the fact that Morocco's external agricultural terms of trade had evolved favourably, with the world prices for "exportables" (citrus and vegetables) increasing relative to those of Morocco's

6 The annual rate of growth of the agricultural GDP was 1% over 1960-1964; 1.5% over 1965-67; and 6.8% over 1968-72. Agriculture was in decline from 1973-77, with an annual rate of growth of -2.4% (Qarouach M, 1987, p11) .

"importables"⁷. Moreover, there is no evidence that the internal terms of trade between agriculture and the rest of the economy had moved against agriculture, as price policies were fairly supportive of the agricultural sector until 1985. Critics of agricultural policy⁸ charge that government intervention has promoted an unsatisfactory structure of incentives, in which resources have channelled towards inefficient producers, at the same time discouraging some producers with competitive advantage. Furthermore, state control of and participation in processing and marketing has resulted in inefficient operations, weakly responsive to changes in world markets. It is also claimed that public investment in rural and agricultural infrastructure and services has exacerbated income inequality, by favouring irrigated area and, within the dryland subsector, the climatically better-favoured areas.

Dualistic agriculture: irrigation versus rainfed production

Irrigated agriculture covers a total of 1.26 million ha, almost 16% of total arable land (432000 ha in large-scale irrigation and 826000 in small and medium-scale irrigation). Irrigation schemes are estimated to account for 33% of the gross value of agricultural output, for 45% of agricultural-value added and for 60% of agricultural exports (World Bank, 1987). Irrigated land produces almost all citrus, vegetables and cotton, 80% of the sugar, 50% of the milk and about 33% of the soft wheat. The irrigated subsector has shown a notable rate of expansion in fertiliser use, in capital stock and in output (Qarouach, 1987, pp46-58). Irrigated production benefits from government subsidies (fertiliser, machinery, investment and equipment) to a much greater extent than the rainfed subsector. Additionally, the key import-substitution crops which receive a high level of support through other policy measures, soft wheat and sugar, are mainly produced under irrigation.

Despite low productivity⁹ and disappointing progress in the adoption of new technologies, rainfed agriculture plays a critical role in Moroccan society because it is the primary source of employment for 75% of the rural population and it produces the bulk of the country's basic food supplies of cereals, pulses and oilseeds¹⁰. Two basic aspects of the bias against rainfed agriculture have been: first, that it has received approximately 25% of total public investment in agriculture between 1965 and 1987 (Social and Economic Plans 1968-72, 1973-77, 1978-80, 1981-85, 1986-88) although it represents 70% of total agricultural gross value; and, second, that policy interventions operating through a range of mechanisms (subsidies/taxes, overvaluation of the exchange rate, external trade policies) have resulted in net transfers from rainfed agriculture¹¹.

7 An index measuring Export (/Import) Value over Export (/Import) Quantity was set at 1 in 1969. In 1987, this index had increased to 4.23 for citrus, 3.96 for tomato, 2.61 for soft wheat and 3 for sugar (index calculated by the authors from data available in "External Trade Statistics").

8 *Morocco: Agricultural Prices and Incentives Study*, World Bank Report, 1987.

9 For example, the average yield for hard wheat is 1.2 ton/ha, three times lower than what can be obtained with irrigation (Qarouach, 1987, p19).

10 The rainfed sector produces 90% of the cereals, 100% of pulses, and 75% of oilseeds.

11 Later in paper it is shown that rainfed crops such as hard wheat and barley received negative effective protection (except in 1980-82 because of low world prices), in contrast to most crops grown under irrigation.

Policies on output pricing and marketing

For a certain number of agricultural products, considered to be essentials, price and marketing control systems were set up to allow the government to set consumer and producer prices. The policy framework can be conveniently described for three broad categories of product: (i) import substitutes (e.g., soft wheat, sugar and oilseeds), (ii) non-traded crops (hard wheat and barley) and (iii) export crops.

Import-substitute crops: soft wheat, sugar crops and oilseed crops:

Producer and consumer prices are fixed each year by negotiation within an interministerial commission. Two parastatals, the *Caisse de Compensation*, for sugar and vegetable oil, and the *Office National Interprofessionnel des Cereales et des Legumineuses (ONICL)*, for cereals, are responsible for the procurement of crops (soft wheat, sugarbeet and sugarcane, oilseeds), transport to licensed processors and the control over distribution of subsidised final products (soft wheat flour and bread, sugar loaf and granulated sugar, vegetable oil) to consumers. Imports are tightly controlled by parastatal organisations, which levy on imports the difference between the world price and the higher domestic fixed price. Because the difference between fixed producer prices and fixed consumer prices does not allow for adequate remuneration of processors and other intermediaries, the parastatals compensate them with transfer payments, which guarantees them fixed processing, storage and transport margins.

For the two support systems described in Figures 3 and 4, it is interesting to analyse the consequences for the budget of policy changes such as: (i) an increase of producer prices or a reduction of consumer subsidy, (ii) changes in world prices, (iii) overall changes in self-sufficiency rates, consumer and producer prices for soft wheat being held constant¹².

If:	Revenue A	Cost B	Net Revenue
Self sufficiency rate ↑	↓	-	↑
Producer price ↑	?	↑	?
World Price ↑	↓	-	↓
Consumer Price ↑	↓	↓	↓

The support system was designed to be self-financing but very soon, expenses exceeded revenues and transfers from the national budget were made necessary to sustain the deficits of the *Caisse* and ONICL.

12 For example, an increase in the self sufficiency rate can be due to productivity gains or to an increase of area planted. This could be due to changes in relative prices affecting the profitability of soft wheat as compared to other crops or to a reduction of consumption (changes in taste or changes in relative prices encouraging the consumption of substitute products).

Figure 3: Partial equilibrium diagram of the sugar support system

The policy frameworks for sugar and vegetable oil are very similar: producer prices and consumer prices are maintained well above world prices. However, consumers are subsidised because they do not pay the full processing costs, which are payed partly by the *Caisse*. The revenues of the *Caisse* come from variable import levies on imported raw sugar and imported raw oil.

(the diagram is drawn for prices and quantities in "equivalent raw sugar")

D: Demand for raw sugar; S:
Supply for raw sugar;
Pp: Producer price;
Pc: Consumer price;
Pw: World price;
Qp: Quantity produced;
Qc: Quantity consumed

Revenue from variable import levies $A = (Q_c - Q_p) * (P_p - P_w)$

Subsidy cost $B = Q_c * (P_p - P_c)$

The system is self financing if $B < A$.

Figure 4: Partial equilibrium diagram for soft wheat

The support system is slightly different from the sugar system, because consumers pay the subsidised flour and bread at prices below the equivalent world prices.

(the diagram is drawn for prices and quantities in "equivalent soft wheat grain")

D: Demand for soft wheat

S: Supply of soft wheat

P_p: Producer price

P_c: Consumer price

P_w: World price

Q_p: Quantity produced

Q_c: Quantity consumed

Revenue from variable import levies $A = (Q_c - Q_p) * (P_p - P_w)$

Subsidy cost $B = Q_c * (P_p - P_c)$

The system cannot be self financing unless consumer prices are raised above world prices and $B < A$.

Non-traded crops: hard wheat and barley

International trade is banned. Imports and exports are only permitted in exceptional circumstances (i.e., to handle severe deficits or high surpluses). Domestic prices are fixed by domestic demand and supply (both supply and demand being influenced by the price of soft wheat, for which hard wheat is a substitute in production and consumption). However, a guaranteed producer floor price is set up by interministerial commission each year: the ONICL is required to buy any quantity of hard wheat or barley offered to it at the guaranteed floor price.

Figure 5: Partial equilibrium diagram for barley

S_b: Supply of barley in bad years
S_g: Supply of barley in good years
D: Demand for barley
P_b: Domestic price in bad years
P_g: Domestic price in good years
P_w: World price
P_f: Guaranteed floor price
Q_b: Quantity produced and demanded in bad years
Q_g: Quantity produced in good years
Q_d: Quantity demanded in good years

The rationale of ONICL intervention is that barley and hard wheat collected by ONICL should be stored until domestic prices rise sufficiently to be sold on the market at prices high enough to cover procurement and storage costs. Thus the ONICL is mandated to act as a stabilisation fund.

Export crops

There is no direct price intervention in the agricultural export sector. However, the government created the *Office de Commercialisation et d'Exportation* (OCE) in 1965, primarily to promote citrus exports. For more than twenty years, the OCE held monopoly of all activities related to citrus, vegetable, horticultural products and wine, i.e., packaging, transport, marketing and promotion in foreign markets. The lack of competition did not encourage operational efficiency or the search for new or more profitable markets. Thus the OCE monopoly penalized the agricultural export sector,

not encouraging efforts for higher quality and losing opportunities to increase market shares on the world market (Development Alternatives Inc, 1990)

Policies on input pricing and marketing

From 1970, a series of measures were brought in by the government to improve the supply and stabilise the price of fertiliser. In 1974, the parastatal FERTIMA was given a monopoly over fertiliser imports and a large share of the distribution market. Retail prices were fixed at a low level to encourage fertiliser use. A freeze in retail prices over 1979 to 1983 caused the private sector to drop out of fertiliser distribution. FERTIMA accumulated a deficit, caused by losses incurred in fertiliser distribution, which was financed by treasury transfers.

Each large scale irrigation schemes is managed by a parastatal agency known as an ORMVA (*Office Régional de Mise en Valeur Agricole*¹³) which is in charge of maintaining the irrigation network, supplying services to farmers (input delivery, veterinary services, extension) and collecting water charges. ORMVAs have the authority to control farmers' cropping mix, a power that has been used to favour industrial crops, such as sugar. The ORMVAs have accumulated financial deficits in the last decade, mainly because of underpricing of water and other services and because of the low recovery of water charges¹⁴.

Effective protection and competitive advantage

Over 1987 to 1990 the Ministry of Agriculture and the World Bank have made estimates of effective protection coefficients and competitive advantage coefficients for farm models for different levels of technology¹⁵. A selection of these estimates are reported in Table I, for three levels of technology:

Level A: rainfed peasant farms, located in low rainfall areas (*bour défavorable*), in which the use of fertiliser and other chemicals is very limited

Level B: semi-intensive farms located in higher rainfall areas (*bour favorable*), making more intensive use of fertiliser and, to a lesser extent, improved seeds and occasional tractor services.

Level C: intensive irrigated farms, making use of selected seeds, chemical fertiliser, insecticides and mechanisation.

13 There are nine ORMVAs in Morocco, corresponding to nine large irrigation schemes: Gharb, Haouz, Moulouya, Tafilalet, Ouarzazat, Souss Massa, Tadla, Loukkos and Doukkalas.

14 In 1984, the total transfer from the national budget to the nine ORMVAs for "operating subsidies" amounted to 229 million DH. It was reduced to 145.7 million DH in 1987 (World Bank, ASAL-I Audit Report, 1989, p85). However, the actual operating expenses can be much higher because there is a degree of confusion between budget for operating expenses and budget for capital expenses.

15 The estimates for 1970 through 1985 come from a World Bank report: Agricultural Price and Incentive study, 1987. The 1988 estimates come from the findings of the second Price and Incentive Study conducted in 1990 *Etude de la Politique de Prix et d'Incitations dans le Secteur Agricole, Phase II*, January 1990, DPAE, AIRD, Agro-Concept, Rabat.

TABLE 1: ESTIMATES OF COEFFICIENTS OF EFFECTIVE PROTECTION (EPC) AND OF DOMESTIC RESOURCE COST RATIOS¹⁶, 1970 TO 1988

SOFT WHEAT

LEVEL:	B		C	
	EPC	DRC	EPC	DRC
1970	0.98	0.77	1.08	0.53
1975	0.83	0.7	0.88	0.55
1980	1.31	1.04	1.42	0.96
1982	1.21	1.06	1.32	0.98
1985	0.91	0.71	0.93	0.45
1988	1.20	0.93 [†]	1.25	1.28 [‡]

HARD WHEAT

LEVEL:	A		B	
	EPC	DRC	EPC	DRC
1970	0.95	0.76	1.03	0.48
1975	0.95	0.74	1.07	0.52
1980	1.42	0.99	1.47	0.88
1982	1.31	1.01	1.34	0.90
1985	0.89	0.55	0.89	0.49
1988	0.94	0.67 ^{ff}	1.13	2.01

† Mean of EPC and DRC calculated in 4 regions: Fes, Settat, Oulmes Rommani and Tanger.

‡ Based on gravity irrigation.

ff Mean of DRC and EPC calculated in four regions: Settat, Oulmes-Rommani, El Kalaa and Tanger.

16 The effective protection coefficient (EPC) aims to capture the net impact of policy on incentives to operate the production system in question. It is the ratio of value-added in domestic prices to value-added in border prices. An EPC < 1 indicates that the net effect of policy is the equivalent of a "taxation" of the production system. An EPC > 1 indicates the equivalent of a "subsidy" to the production system.

The domestic resource cost ratio (DRC) is based on the shadow-pricing of inputs and outputs to take into account distortions, and is the cost of domestic factors divided by value-added, calculated at these shadow prices. The DRC is treated as an indicator of the competitive advantage (some analysts say comparative advantage) of a production system: a DRC < 1 being taken as indicating that a system has competitive advantage.

The nominal protection coefficient (NPC) aims to capture the impact of policy on output markets only. It is the ratio of the domestic price to the relevant import or export parity price.

A common approach to agricultural policy analysis is to compare the incentive framework, as revealed by the EPC, with developmental objectives. For example, if economic efficiency is the objective, then the incentive framework should not overly encourage systems with competitive disadvantage, or discourage systems with competitive advantage.

BARLEY

LEVEL:	A		B	
	EPC	DRC	EPC	DRC
1970	0.82	0.61	0.92	0.85
1975	0.88	0.67	0.99	0.84
1980	1.5	0.92	1.62	0.99
1982	1.23	0.95	1.34	1.01
1985	0.81	0.61	0.80	0.45
1988 ¹⁷	0.96	1.51	0.90	0.92

SUGAR-BEET

LEVEL:	C		
	NPC	EPC	DRC
1970	1.31	1.83	2.54
1975	0.65	0.89	0.80
1980	1.10	2.72	3.32
1982	1.27	2.25	2.56
1985	1.15	1.70	2.01

SUGARCANE

LEVEL:	C		
	NPC	EPC	DRC
1970	1.30	1.56	2.01
1975	0.62	0.84	0.74
1980	1.10	2.03	2.54
1982	1.24	1.61	2.62
1985	1.31	1.78	1.23

CITRUS (Navel oranges)

LEVEL:	C		
	NPC	EPC	DRC
1970	0.99	1.04	0.59
1975	0.98	1.04	0.64
1980	0.98	1.19	0.5
1982	0.99	1.18	0.53
1985	0.82	0.85	0.48
1988 ^f	0.86	0.86	1.10

f. For the irrigation scheme Gharb, for standard yield (27 tonnes/Ha)

17 Mean of DRC and EPC calculated in four area: Settat, Oulmes-Rommani, El Kalaa and Tanger.

Implications of the analysis of protection and competitive advantage:

From 1970 to 1984 , prior to the first agricultural adjustment loan (ASAL I)

It was estimated by the World Bank (Agricultural Price and Incentive study, 1987) that, in 1984-85, the output-weighted effective protection for agriculture as a whole was 1.2 compared to 1.3 for industry. Moreover, as noted above, agriculture had not suffered from an unfavourable evolution of its terms of trade relative to other sectors. The broad conclusion which follows from this is that the policy environment for agriculture has not been one of a strong anti-agriculture bias, but rather of interventions within the agricultural sector which have brought about inefficient resource allocation as between commodities and as between farming systems. Additionally, monopolies and other forms of market regulation have inhibited competition, particularly in processing and marketing.

Irrigated farming enjoyed a level of protection of about 50% whereas, in general, rainfed farming was not protected (EPC =1, on average). There are two basic reasons for this finding: cereals, which are mostly grown by rainfed agriculture, suffered negative protection during the 1970s, whereas import substitution crops, 80% of which are grown in irrigated areas, have benefitted from large transfers through producer price support. Moreover, the subsidy to fertiliser mainly benefitted farmers in irrigated zones, because their systems require a high level of inputs, access to which was facilitated by the ORMVA. Only irrigated farmers benefitted from the subsidy on water supply and the lax collection of water charges.

Irrigated export crops have benefitted less from policy than irrigated import substitution crops, because the positive transfers represented by input subsidies have been partly offset by negative policy effects on the output price (overvalued exchange rate and import licensing requirements, monopoly control of the OCE).

In contrast to the privileged position of irrigated farmers, farmers in rainfed areas often experienced a weaker input supply service. Furthermore, they were not always able to sell soft wheat at the preferential official price (usually above open market prices) because of limitations in the coverage of the ONICL procurement system.

The DRC estimates demonstrate that, in general, Morocco has had a substantial competitive advantage in cereals, except during episodes when world prices have been very low. Competitive advantage appears to be most pronounced in the rainfed peasant systems, if the supply instability associated with climatic variability is ignored. Yet the net effects of policy have tended to discriminate against rainfed farming. Morocco has also a competitive advantage in citrus. Here also, policies have tended to discriminate against agricultural exports (see EPCs for citrus), resulting in protection levels which have varied from negative to positive but relatively low.

The DRC estimates for sugar imply strong competitive disadvantage, but these results have to be tempered by the fact that the world price of sugar is based on a residual "spot" market, the prices in which do not give a convincing measure of the true value of sugar. Thus these DRC estimates exaggerate the inefficiency of Morocco's sugar industry.

The budgetary costs of agricultural policy

The burden to the budget of agricultural price intervention rose steadily from the early 1970s, peaking in 1984-85. A new departure was the massive government intervention of the 1974-75 season, a reaction to price instability on international markets, which had made Morocco acutely aware of the exposure of its fragile political and economic balance to international commodity markets. The government raised the priority of the strategic goal of import substitution in agriculture, an emphasis reinforced by the Sahara war, which raised the question of vulnerability to international pressure through trade sanctions. New campaigns were launched to encourage the production of cereals. Fertiliser subsidies were implemented, initially as a temporary measure to protect the producers from rising world prices of phosphate derivatives and chemicals, but these subsidies became permanent. These measures to promote import substitution were facilitated by the additional revenue made available by phosphate price boom on the world market.

The increasing scale of intervention in agricultural prices gave rise to serious coordination and management problems and to a growing burden on the public budget. Although, in principle, the *Caisse* and the ONICL were supposed to be self financing, it appeared very soon that the bulk of subsidy cost had to be borne by budgetary transfers. The average cost of intervention rose threefold for edible oil between 1974-76 and 1983-85 and twofold for sugar over the same period. The level of public expenditure on agricultural price support soared from the mid 1970s to mid 1980s, but began to be brought under control in 1986.

TABLE 2 : Cost to the budget of policies of consumer and producer price support for cereals, sugar and vegetable oil from 1973 to 1989 (in million DH)

YEARS	TOTAL (excluding fertiliser)	CEREALS	SUGAR	VEGETABLE OIL	FERTILISER
1973	197	135	64	0	-
1974	915	200	458	264	-
1975	1429	280	935	200	131
1976	686	150	464	57	51
1977	549	50	310	160	49
1978	547	0	275	205	61
1979	919	203	360	298	89
1980	1289	492	476	254	161
1981	1649	485	887	257	221
1982	1237	520	386	213	236
1983	1606	650	470	326	209
1984	2155	910	645	600	334
1985	2693	1407	338	813	408
1986	1533	888	182	448	?
1987	632	321	311	?	?
1988	1277	334	794	149	?
1989	1696	842	500	280	?
1990	1021	24	516	481	?

Source: *Banque Al Maghrib* (annual reports)

THE MACROECONOMIC IMPERATIVES FOR POLICY REFORM

Macroeconomic performance

The phosphate boom and after

In response to the slow rate of economic growth in the first decade of Independence¹⁸, the government took strong measures in 1964 to raise taxes and increase import controls (1965-67 Social and Economic Plan). These measures reinforced social discontent among the urban population, which threatened political stability¹⁹, and which the government counteracted by introducing food subsidies.

In the wake of the 1973 oil shock, phosphate prices jumped, quadrupling export earnings from phosphate. Government revenue grew by a factor of three between 1972 and 1975, encouraging it to embark on a risky policy of accelerated growth. The objectives of the 1973-77 Economic Plan were adjusted upwards and spending for capital and recurrent expenditure (see Figure 6) was much increased. In the agricultural sector, the schedule for dam construction and irrigation equipment was accelerated. Expenditure on consumer subsidies rose, this being used as a principal counter-inflationary measure. Largely as a consequence of the boom in phosphate revenues, the GDP growth rate jumped from 4% in 1973 to 7.5% during the 73-75 period (see Figure 7)

The phosphate boom was short-lived, and the sharp fall in prices, which occurred after less than two years of euphoria, led rapidly to major disequilibria in the economy. The economy now exhibited symptoms of "Dutch Disease". The budget deficit, which had been balanced in 1976, soared in 1977, and subsequently worsened. This was due, in part, to the reluctance of the government to cutback on recurrent expenditure or planned capital expenditure, or to abandon the central role of subsidies in countering inflation. From the end of the 1970s, exports were adversely affected by the gloomy climate of international markets. In 1978, agricultural imports exceeded agricultural exports. As a sector mainly producing tradable goods, agriculture was adversely affected not only by weakening external markets, but also by the anti-export bias which was the result of the overvaluation of the dirham.

After 1976, growth was based on high levels of public spending and this was, in turn, financed by foreign borrowing. The debt service ratio increased sharply from 12% of GDP over 1974 to 37% in 1977 and 118% in 1983. Yet, from the late 1970s, foreign financing became more difficult, due to rising interest rates, the appreciation of the dollar and the wariness of foreign banks to grant additional credit. The second oil shock of 1979 placed additional strain on the balance of payments coinciding with higher defence expenditure related to the intensification of the Sahara conflict. This led Morocco into unsustainable macroeconomic disequilibria and indebtedness which culminated, notwithstanding IMF supported attempts at stabilisation, in the foreign exchange crisis of March 1983.

18 Due to rapid increase in population growth, capital outflow and increasing imports.

19 Strikes in 1965, and attempted coups in 1971 and 1972.

Initial attempts at stabilisation and adjustment

Prior to the crisis of March 1983, the government, with IMF support, had tried to readjust the economy and restrain domestic demand. In addition to the acute macroeconomic disequilibria already discussed, Morocco had to face structural constraints which undermined prospects for recovery and development. Key issues were:

In international trade: a poor export performance had been registered since the 1960s but the unfavourable terms of trade brought by the international recession worsened the problem. The trade and exchange policies prevailing in the 1970s created a strong anti-export bias.

Savings and fiscal receipts: real interest rates were negative and private savings were low²⁰. Moreover, budget receipts were primarily derived from indirect taxes, in particular import taxes, and the share of revenue derived from direct taxes was low, due to a slack income tax system. Under strong pressure to mobilise revenue, the government had raised the rates of existing tax instruments (mainly taxes on traded items: eg, the Special Import Tax), rather than broaden the basis of taxation. The consequence was an accentuated "anti-trade" bias. Moreover, biases across sectors, firms and individuals accentuated the distortive effect on income redistribution and efficiency (Horton, 1990).

The import substitution strategy: the government promoted and/or participated in a number of capital-intensive projects, costly in foreign exchange and giving rise to industries which, assessed at world market prices, were inefficient (i.e. had competitive disadvantage). Agricultural examples are the sugar and the vegetable oil industries, which benefited from a strongly protective policy regime designed to raise their share of the domestic market. The incentive structure facing these industries was such as to encourage a concentration on lobbying government for trade favours and subsidies rather than on increasing productivity and competitiveness. (The incentives for the latter activity were weak, due to protection from foreign competition and the prevalence of non-competitive practices among suppliers to the domestic market).

A series of stabilisation programmes were thwarted by the international conjuncture and by difficulties in the negotiations between the government and the IMF. Morocco received standby assistance from the IMF from 1978 followed by, from 1980, a three year Extended Financing Facility (EFF). In 1982, the EFF was converted into a one year Stand-By²¹. The stabilisation programmes had been unsuccessful in addressing Morocco's specific problems, partly because they tackled only a limited range of policy issues and partly because Morocco did not comply with some of the

20 Average private savings between 1970 and 1974 were 14% of GDP, dropping after 1980 to 11% of GDP.

21 A deeper analysis of the content of the IMF programmes is found in Horton, B.1990.

conditions²². A much broader review of policy was required, with subsequent actions on a wider front.

In 1983, facing a foreign exchange crisis, Morocco had to ask for the support of the World Bank in the form of policy-based lending, and thus had to acknowledge the necessity of undertaking significant changes in the trade regime, the structure of production incentives and the extent of consumer subsidies. The government's reluctance to undergo such reforms was understandable because they were politically risky but "it was argued that the cost of not undertaking the required economic adjustment would be greater in the long run" (Seddon, 1989, p251).

Industrial and Trade Policy Reforms

World Bank support for policy reform began with the Industrial and Trade Policy Adjustment Loan (ITPAL)²³ disbursed in 1984. The ITPAL had the objective of promoting faster growth in the industrial and export sector, by means of changes in the structure of prices and incentives and the reduction of trade barriers. A first loan of US\$150.4 million was approved in January 1984, followed by a second loan of US\$200mn in July 1985. Throughout this period, the IMF provided complementary support to the stabilisation and adjustment. In effect, there was a joint World Bank - IMF programme.

The objectives of the proposed package of policies were mainstream examples of the adjustment policies promoted by the Washington institutions in the mid-1980s: stabilisation was the short term objective and the medium-to-longer term objective was a reform of policies (i.e., "structural adjustment") to promote growth.

The stabilisation programme continued to receive IMF support, in the form of a series of three stand-by loans²⁴ and was designed in collaboration with the World Bank. The objective was to attain sustainable macroeconomic balance by 1988. A series of contractionary measures were implemented with limited success, these being reductions in public expenditure, limitations on public sector employment and salaries, price increases to reduce the consumer subsidies, reduction in arrears on government payments and ceilings on credit. An important aspect of the programme was that Morocco obtained a rescheduling of the debt: creditors agreed to US\$8 billion in debt relief between 1983 and 1988.

The adjustment objectives of the ITPAL were to promote more rapid growth in the industrial and export sectors by improving the system of incentives (inducing more efficient allocation of resources), encouraging an outward-orientation (via incentives for exports and sounder import substitution policies), more effective mobilisation of domestic resources and improved availability of long term finance for the industrial sector.

22 Reasons for low compliance were: the increasing commitment to Sahara war which raised defence expenditure; internal pressure from popular protest and from producer groups.

23 *Programme d'Ajustement pour l'Industrie et le Commerce International*, 1984

24 In September 1983 for SDR 300mn; in September 1985 for SDR 190mn; in December 1986 for SDR 230mn.

Implementation of the industrial and trade policy reforms and associated stabilisation

Under the IMF standby arrangement, the exchange rate had been devalued by 15% between September 1980 and March 1982. It was further devalued by 10% in August 1983. Other smaller adjustments took place in 1984 (7% in February-March), in 1985 (13% between March and July). The cumulative nominal devaluation amounted for 22% between 1980 and 1985 and 14% in real terms (see Figure 8). Steps were gradually introduced to correct the anti-export biases, notably the monopoly control of OCE was relaxed. Export licensing requirements for agricultural products were abolished, except for staples. Administrative trade procedures for exports were simplified. An information campaign was launched to promote exports. Exporters were granted duty-free access to imported inputs.

Reforms were undertaken in trade protection with the objective of reducing the overall level of protection to 25% and of equalising tariff rates within and across sectors. Measures included the gradual phasing out of all import licensing requirements, the elimination of the Special Import Tax (SIT) and the rationalisation of custom duties. As a token of its commitment to liberalise trade, Morocco joined the GATT in 1987.

Complementary fiscal reforms aimed to achieve fiscal neutrality between domestically produced and imported products and to equalise fiscal pressure as between industries. Two important changes were the introduction of value-added tax to replace the existing sales tax and the bringing in of a unified system of personal income tax. Financial reforms focused on the structure and level of interest rates. Real interest rates were raised to positive levels and it was agreed that interest rate management would be flexible. Measures were taken to improve resource mobilisation in the banking system, mainly by reducing the obligations which had existed for the commercial banking system to finance the government deficit.

Most of the measures agreed during the negotiations were implemented on schedule, except that the phasing-out of the SIT fell behind the agreed timetable because the government wished to maintain revenue levels as receipts from the newly introduced taxes were below projections²⁵.

Impact of early reform measures

According to the World Bank's own evaluation²⁶, devaluation invigorated the export sector, this, together with the elimination of some controls (importantly the liberalisation of export marketing channels) encouraged exports. The Bank argues that, due to a sharp fall in phosphate prices, the improved trade performance is obscured

25 The SIT was reduced from 15% to 10% in 1984, but was kept in place in 1985 despite the government having agreed to its abolition. It was further reduced in 1986 and in 1987 stood at 5%.

26 World Bank: Program Performance Audit Report on ITPAL, 1989.

in the aggregate trade data²⁷. Another effect of the devaluation was to partially offset the effect of reduction in tariffs, thus reducing the burden on import-competing sectors. However, it also increased substantially the burden of the debt in dirham terms²⁸. In the agricultural sector, the effects of the policy changes are less easy to determine. There is no clear evidence that the devaluation has improved the overall environment for agricultural exports (citrus, vegetables and cut flowers).

Devaluation generated substantial difficulties for the financing of existing agricultural policy, as food imports became more expensive in dirham terms, in particular, wheat, sugar and oil. This narrowed the gap between the dirham import price and the domestic price of imported raw sugar, raw oil, and cereals, reducing the revenue generated by the *Caisse de Compensation* and the *ONICL* from variable import levies. Thus a greater proportion of the costs of policy support to import-substituting sectors of agriculture had to be met by direct subsidies from the government budget. Consequently devaluation caused a switch of emphasis to more transparent measures of support for import-substituting agriculture, measures which placed serious pressure on the budget deficit. It may be speculated that more transparency concerning the costs of policy may create the preconditions for wider political support for reform.

AGRICULTURAL POLICY REFORMS

The Medium Term Agricultural Structural Adjustment Programme

It was concern about the budget deficit which precipitated the first World Bank sectoral loan for agriculture. The Bank, in collaboration with the government, analysed the constraints on development of agriculture, provided a critique of existing policies and designed a Medium Term Agricultural Structural Adjustment Programme²⁹ (MTASAP) in 1983 to be implemented between 1984 and 1990. The MTASAP documents argued that the existing highly interventionist trade and pricing regime had the effect of protecting import substitution activities in irrigated areas and of penalising export activities and, more generally, the rainfed subsector. Moreover, it was emphasised that the price support programmes, by insulating the producer and consumer prices from world market trends, had not encouraged productivity gains and had suppressed the development of potential comparative advantages. It was also argued that these pricing policies were income regressive, by favouring crops,

27 Some economists disagree, arguing that increased prices of imported inputs have offset the effect of devaluation on output price such that competitive advantage of the Moroccan industry was eroded. Saadi (1991, p47) gives figures showing that exports in volume of industrial commodities (excluding phosphate and phosphoric products) fell by 1.m ton between 1983 and 1987. These authors miss the point that devaluation is expected to have differential effects on production systems, favouring those which make relatively intensive use of domestic resources.

28 The debt-to-GDP ratio increased from 43% in 1980 to 116% in 1985.

29 The reforms associated with the Medium Term Agricultural Sector Adjustment Loan were set out by the Minister of Agriculture on his 3 December 1983 Letter of Intent: 61 measures were to be monitored.

technologies and processing systems operated by relatively wealthy components of the agricultural community.

Thus the essential purpose of the MTASAP was to improve the efficiency of resource allocation in the agricultural sector, to encourage productivity gains and to alleviate the burden of food policies on the budget. It was believed that improved efficiency and accelerated growth in the agricultural sector would contribute to the restoration of macroeconomic equilibria and improve income distribution and general welfare.

The four main thrusts of the MTASAP were:

(i) Reduction and redirection of government agricultural spending to rebalance public investment as between irrigated and rainfed agriculture.

(ii) Cutting-back price interventions (price controls and subsidies) to restructure the incentive framework and to eliminate distortions. This also implies a more transparent protection system, based on uniform tariffs. The objective was that level of protection for import substituting production should be consistent with the level of protection enjoyed in the industrial sector.

(iii) Market liberalisation (increased competition in domestic markets and greater exposure to international markets through multiple export channels).

(iv) Privatisation: reforms were to involve reduction of the role of various *Offices*, creating scope for the private sector to take over responsibilities in a certain number of commercial and processing activities.

The components of the reform were seen as interactive. For example, where a market was dominated by a parastatal enterprise, division and privatisation were needed to promote competition. Furthermore, gains in efficiency achieved by competition and by expanding activities with competitive advantage can soften the impact on producers and consumers of rising input prices, reduced subsidies and greater exposure to the international market.

The First Agricultural Sector Adjustment Loan

The World Bank's First Agricultural Sector Adjustment Loan to Morocco (ASAL-I), approved in July 1985 for an amount of US\$100 million, was disbursed in support of the MTASAP. The conditions of the loan were the object of long negotiations between the World Bank and the government. An absence of appropriate analytical tools and shortages of data³⁰ constituted major obstacles to the setting and monitoring of a detailed set of conditions. The result was a mix of tightly "defined conditions and

30 For example, very little was known on the likely consequences of reduced input subsidy on input use and farm income.

loosely-drawn covenants³¹.

The agreed reforms included the gradual elimination of fertiliser subsidies; fuller recovery of the costs of water and of the costs of marketing services provided to farmers by irrigation agencies (in the case of water this included raising recovery rates for existing charges); phasing out the system of price and distribution control for animal feed and setting higher floor prices for cereals.

Implementation of ASAL-I

On the input side, fertiliser prices were raised by 15% in a first step, then by a further 20% (above the 15% agreed in negotiation). Steps were taken towards deregulation of fertiliser marketing by giving greater scope to the private sector³². Revenue from irrigation water charges improved, the national figures for the collection of charges levied increasing from 47% in 1984 to 67% in 1986. Some services provided to farmers by state agencies, such as land preparation and artificial insemination for livestock, were charged at full cost. Agricultural extension services were reorganised to improve efficiency, and the management of the public research institute *Institut National pour la Recherche Agronomique* (INRA) was reviewed and strengthened³³.

On the output side, a grain storage subsidy was introduced, at 26DH per ton/month, to encourage cereal storage and, thereby, to encourage grain collection at farmgate or nearby. Official grain prices were increased by an average of 35%³⁴. A methodology was developed to generate advice on appropriate policies for a phased alignment of domestic and international prices. Prices of dehydrated sugarbeet pulp and of wheat bran were raised by, respectively, 15% and 40%.

Effects of the First Agricultural Structural Adjustment Loan

The agricultural budget

The reforms of ASAL-I were relatively limited in scope. A major impediment to the negotiations proved to be limitations in understanding, by the government and by the World Bank, of the effects of existing agricultural policies, and the absence, at this stage, of an agreed methodology for examining these matters. Essentially, the reforms were driven by the necessity to cut spending, and, at this point, there was only weak domestic impetus to embark on fundamental reforms of agricultural and rural policy. Nevertheless, as is discussed below, the government's cost-cutting measures turned out to be tougher than had been agreed under ASAL-I. In view of the strong

31. World Bank : Programme Performance Audit Report for ASAL-I Loan 2590-MOR, June 1989.

32. The monopoly control held by the parastatal agency FERTIMA was partially withdrawn.

33. A certain number of research stations were closed and their staff redeployed. A higher operating budget was allocated to the remaining stations.

34. The fixed official price for soft wheat was increased from 150DH/qt in 1984 to 180DH/qt in 1985 and 200DH/qt in 1986. The minimum support price was increased between 1984 and 1986: from 140 to 180 DH/qt for hard wheat, from 100 to 150 DH/qt for barley and from 100 to 160 DH/qt for maize (source *ONICL*). One quintal (abbreviated as qt) is equivalent to 100 kg.

macroeconomic pressure for reduction in public spending, it is doubtful that ASAL-I induced the government to undertake policy changes which it would not, in any case, have had to implement.

Public spending for agriculture was reduced by 25% between 1985 and 1987. All of the quantified conditions of ASAL-I concerned the removal of subsidies or the privatisation of services formerly supplied by public agencies at below cost. Implementation of these measures resulted in fiscal savings (except for grain storage bonus increases), providing immediate relief to the Treasury, which was under strong pressure to control growth in public spending. This explains why, in certain cases, the government went beyond the ASAL-1 conditions (e.g., in addition to the fertiliser price increase, already noted, the price of sugar beet pulp was raised in excess of the agreed level). Furthermore, in 20 zones, the government did not limit the privatisation process to the artificial insemination services but closed down the entire public veterinary service.

Efficiency of resource use

An overall objective of ASAL-I was to bring domestic prices into closer alignment with international prices. The price effects of the reforms were to reduce input subsidies and to substantially raise cereal prices which had been maintained at below world prices. In the absence of a consistent series of *effective protection ratio* calculations, it is not possible to draw definitive conclusions about changes in the level of protection received by producers³⁵. However, logic would suggest that the reduction of fertiliser subsidy and the substantial increase of cereal prices have re-established a certain level of consistency between the protection of the agricultural subsectors, by bringing effective protection closer to unity.

In terms of efficiency of resource use, the reduction of the gap between fixed internal prices for fertilisers and world prices should lead to a more efficient use of resources, by discouraging producers from using quantities beyond the point where marginal product is equal to opportunity cost. This should then lead to a better allocation of resources and a potential increase in national income.

Production and income distribution

In the short term, the expenditure cuts corresponded to losses for farmers, because they had to bear the additional cost of fertiliser and veterinary services. Very few official studies were undertaken to assess the impact on farm income³⁶. The 38%

35 In cases where governments use non-tariff instruments for the protection of agriculture, such as the mix of quotas, variable levies and price supports used in Morocco, it is possible to have a degree of price reform in the direction of world market prices, and yet to fail to lower effective protection, if over the same period world prices fall by a greater proportion than the downward adjustment in domestic support. Ideally, an evaluation of the effects of reform on protection should examine EPCs "with and without", not "before and after". In other words, the evaluation should seek to quantify the difference between actual EPCs and those which would have been experienced if policies had been unchanged.

36 An analysis of eight representative farm models was conducted by the Planning and Economic Affairs Directorate (DPAE: *Direction des Prix et des Affaires Economiques*). Comparing changes in income between 1984 and 1987, it concluded that farmers had suffered a net income loss of 2% on average, with the range being +8% to -11%. These results are open to the challenge that they assume all farmers have been able to sell output and purchase inputs at official prices, although failures in the official marketing system have meant that the terms of trade have been more adverse for the poorer and more remote rainfed farmers. It is possible that the reforms have led to some convergence

increase in fertiliser prices obviously hit the fertiliser users. In general, producers making intensive use of fertiliser are concentrated in irrigated areas and are usually wealthier than the farmers in rainfed areas. The broad conclusion drawn from this was that large landowners would be the most affected by the price increase, and thus it was argued that this reform was income progressive .

However, it is necessary to consider the price elasticity of demand for fertiliser of different categories of farms, and how these elasticities may be influenced by the higher risks of rainfed farming and the likelihood that poorer farmers are more averse to financial risks, have very limited working capital and face greater difficulties in borrowing to finance inputs. It is probable that small farmers' demand for fertiliser is more sensitive to price than that of large farmers, and, therefore, that an increase in fertiliser prices may also have an income-regressive effect. At present there is insufficient evidence to resolve this question: national level data do not display a significant fall in fertiliser consumption after the price rise. But it is not possible to dismiss the argument that an increase of fertiliser use by a few large-scale producers (encouraged by better incentives for exports) could have off-set a reduction in fertiliser use by smallholders in the rainfed sector. The effects of fertiliser price changes on income distribution and on the diffusion of new technology is an important issue meriting further research³⁷.

In summary

The present sketchy evidence implies that the income redistribution effects of ASAL-I have been ambiguous and that there are no obvious beneficiaries. However, it can be said that this subsidy reduction process, driven by macroeconomic requirements, was made in a way that was not income regressive. Much worse counterfactual scenarios can be imagined (e.g quantity rationing of subsidised inputs would have developed a black market benefitting the richer).

It is extremely difficult to distinguish the impact of the ASAL-I reforms from those of other policy changes, including those in macroeconomic policy and in the financial and trade sectors (resulting from ITPAL), climatic effects and the variations in world prices. What can be said is that ASAL-I was a decisive step in the process of negotiations between the World Bank and the government and, internally, between the Ministries of Agriculture³⁸ and of Finance. For the first time, the government had implemented a substantial reduction in producer subsidies. By the inclusion of these decisions in the Economic Plan of 1986-88, the government began to demonstrate a greater degree of commitment to the reform process.

in the prices facing more and less privileged farmers.

37 Fontaine (1991) concludes from a review of the literature (p.48) that demand for fertiliser over-reacts to changes in fertiliser prices. Key factors relevant to the case of poor, low input smallholder farming are the high substitutability for other inputs, especially non-marketed inputs, and the risk-aversion premium placed on priced inputs.

38 *Ministère de l'Agriculture et de la Réforme Agraire* (MARA).

The Second Agricultural Adjustment Loan, ASAL-II

It has already been noted that the government viewed the reforms under ASAL-I as an exercise in trimming the costs of existing agricultural policy and that, at this stage, it had little appetite for deeper reforms of agricultural policy. On the other hand, the World Bank was keen to encourage substantial reform in the structure of protection, based on closer alignment of domestic and world prices, further liberalisation of marketing channels, disengagement by the state from the supply of agricultural services and the management of agricultural production.

The second adjustment loan (US\$225 million)³⁹ comprised the second phase of the MTASAP, which was itself expanded and refined after the experience gained in the first ASAP. This phase emphasised three main areas: reform of the prices and incentives framework; the speeding up of liberalisation of markets (*disengagement*) and the promotion of agro-industrial exports.

The negotiated policy changes were far reaching, at least in intent. They fell under three headings: (i) price and incentive framework; (ii) the role of the private sector and (iii) promoting exports. Agreed changes in the *principles* of the prices and incentives framework were:

liberalisation of external agricultural trade by eliminating the government's monopoly on imports and replacing quantity restrictions by tariffs (i.e., tariffication);

reduction of inter- and intra-sectoral distortions in the pattern of protection by eliminating input and output subsidies and setting up an across-the-board protection rate of 25-30%, to be maintained by tariffs;

replacement of the present system of consumer subsidies by targeted compensatory programs for low income groups (food distribution and subsidies on inferior goods);

deregulation of the domestic marketing for grain, sugar and edible oils to promote competition which would in turn lead to gains in productivity and costs reduction.

Specific scenarios were proposed for the major crops: cereals and flour, oil crops and edible oils and sugar. The proposed sugar and cereal reforms are considered in detail later in this paper.

Under the "promotion of the private sector", what was envisaged was a continuation of the process begun in ASAL-I, of trimming back state services to farmers, and increasing cost recovery for those state services which remained. This, it

39 For further information, see document of the World Bank: Report and Recommendation of the President of the IBRD on a Proposed Loan in an amount equivalent to US\$225 million to the Kingdom of Morocco for a Second Agricultural Sector Adjustment Loan: October 1987.

was intended, would create an environment within which private sector services (e.g. in inputs supply, output marketing) would find it attractive to grow. It was agreed that, in principle, the state would withdraw from the supply of services which could be provided by the private sector on a commercially viable and efficient basis. Steps to reduce the involvement of the ORMVAS in input and output marketing had been taken under ASAL-I, parallel to the Programme of Improvement of Large Scale Irrigation (PAGI-I.)

Export expansion efforts were supported by the Industrial and Trade Policy Adjustment Loan. Specific constraints were identified in the agro-industrial export sector and proposals were made to simplify trade procedures (in particular the quality control system). Until 1986, the export quality control was undertaken by OCE, which charged up to 1% of the total export value (a relatively high rate by international standards). Following the elimination of OCE's monopoly, a new system was put in place.

Implementation of ASAL-II

ASAL-II has proved to be more contentious and difficult to implement than ASAL-I. Although the first tranche of the loan was disbursed in 1987, the conditions under which the remaining tranches were to be disbursed remained uncertain. Delays in the decision-making and reform implementation piled-up and, as of 1991, detailed targets and implementation of most of the conditions mentioned in the ASAL-II agreement are still to be negotiated between the World Bank and the government.

Part of the explanation for the slow pace of implementation of the reforms outlined in ASAL -II can be found in the broad-brush nature of the outline agreement. Essentially it was a prospectus for change, the details to be determined later. Not surprisingly, work on the details threw up a lot of problems.

DESCRIPTION OF THE CEREAL SYSTEM

The following sections of this paper provide an analysis of the ASAL-II restructuring programme as it affected two agricultural subsectors, cereals and sugar, to highlight some of the constraints and complications faced by policy makers. The focus on the sugar and cereal subsectors is justified by the fact that they are the two leading contributors to agricultural GDP, and have benefitted from government support in the last decades through the control of the processing and marketing chains by state agencies. Consumer prices for sugar and for soft wheat flour have been massively subsidised. Sugar is mainly produced in irrigated areas, whereas cereals are the main crops cultivated in rainfed agriculture. An important difference between the cereal and sugar subsectors is that the former are traditionally cultivated, whereas sugar production expanded as a result of a major emphasis of post-Independence strategy, which required massive public investment in irrigation and processing, as well as substantial policy support.

Structure of supply and demand

Barley and hard wheat are the two traditional crops, soft wheat having been introduced during the Protectorate. The demand for cereals increased from 4.2 to 6 million tonnes over 1971 to 1988, although the consumption per capita has been slowly declining. As Table 3 shows, there are disparities between urban and rural areas in the use of cereals, due to the use of barley as animal feed. Another key point is that the share of soft wheat in the total consumption of cereals rose threefold between 1970 and 1985, relegating hard wheat and barley, respectively to second and third place in consumption.

TABLE 3: Cereal consumption per capita and per year (equivalent Kg of grain)

	1970			1985		
	Rural	Urban	Total	Rural	Urban	Total
Soft Wheat	31.5	71	44.5	131	126.5	129
Hard Wheat	91	74.5	85.5	52	31	42.5
Barley	92	5.5	63.5	47	5.5	28.5
Maize	23	0.5	15.5	8	0.5	4.5
Others	7.5	6.5	7	4	5.5	5.5
TOTAL	245	158	216	242	169	210

source: *Ministère du Plan* (Belghazi 1990)

More than 90% of the farms include cereals in their cropping pattern, for their own consumption (hard wheat) and animal feed (barley). In 1989, production of barley represents 45% of total cereal production, soft wheat 27%, hard wheat 21% and maize 7%. Trends in cereal production are shown in figures 9, 10, 11, 12: Soft wheat production was stable between 1960 and 1981, but then increased rapidly from 1981, such that production increased by a factor of nine over last decade. The self sufficiency rate did not exhibit a comparable improvement, because of a boom in consumption, encouraged by subsidies. Growth of production has been achieved by extensification of area: average yields have not improved significantly and remain low. Cereal production suffers large inter-annual fluctuations because more than 75% is rainfed.

The cereals support system

State intervention in cereal marketing, initiated during the Protectorate to encourage soft wheat production by the settlers, was revived in the late sixties. The three objectives of intervention were: to guarantee a minimum income to producers; to preserve the purchasing power, in real terms, of the consumers; and to achieve a higher rate of self sufficiency. As explained earlier, the government intervenes through

the ONICL.

In the case of maize, hard wheat and barley, the price is determined freely by the mechanism of domestic supply and demand and the government controls foreign trade: for barley and hard wheat, trade is banned (except in situations of large surpluses or severe shortages). The state also guarantees a producer floor price⁴⁰, supported by the ONICL as a last resort buyer, storing the grain in surplus if the domestic market price falls below the floor price. However, the quantities captured by

40 *Regime du prix de soutien*

the official market remain small: on average, 5% of the national production of hard wheat is bought by ONICL, the proportion falls below 4% in the case of barley. This is due to the fact that market prices remain usually far above the guaranteed floor price (see Figures 13, 14 and 15). Moreover, if the market price happens to fall below the floor price (for example, harvest time in good years), the storage capacity of the ONICL procurement system is not sufficient to respond to the demand and producers in remote areas do not succeed in selling their output at the official price.

The soft wheat marketing system

The entire marketing system is designed to provide soft wheat producers with a uniform pan-territorial price and to guarantee to the consumers a pan-territorial subsidised price for soft wheat flour and bread. The system is based on the co-existence of a free market and of an official market controlled by the ONICL. About 40% of national production enters official channels. Of the remainder, five-sixths is consumed on the farm and one-sixth circulates on a free market (via village and town *souks*).

A guaranteed pan-territorial producer price⁴¹ is fixed by an interministerial commission and the ONICL organises the soft wheat procurement through a network of licensed traders and cooperatives. They are compensated for transport and storage costs by a fixed margin paid by ONICL. Soft wheat collected by ONICL is delivered to the milling industry. As in the case of sugar and vegetable oil, the consumer price of bread and flour⁴² is guaranteed by the government. ONICL reimburses the mills for the difference between the cost of production of flour, calculated as the official grain price plus a fixed milling margin, and the subsidized price at which flour is sold to consumers. The margin is calculated on the basis of average milling costs.

Thus, on the official market, the price mechanism has been eliminated. Prices are unified at each stage of the marketing chain and intermediaries are paid fixed margins per units of quantity. The consumer subsidy lies in the transfer payments from ONICL to traders and processors. Some analysts have argued that free market producer prices were not insulated from subsidized consumer prices, and were depressed by ONICL's intervention⁴³. The depressive effect on free market producer prices resulted because the free market producer price was determined by the consumer price (much influenced by ONICL), less the margins of free-market intermediaries, who, in their turn, did not receive subsidies from ONICL, and, therefore, paid producers a lower price. The differences between free-market and official producers prices, and the generally lower level of the former, result from a number of factors. Probably, the most important of these is the uneven geographical coverage of the official purchasing system due to insufficient storage capacity and to insufficient storage and transport margins, which discourage the licensed traders from collecting grain in remote places or grain of uneven quality.

41 *Régime du prix taxé*

42 After 1986, only the low quality soft wheat flour (*farine nationale*) benefitted from the price subsidy.

43 World Bank Report: Medium Term Agricultural Sector Adjustment Program P-4437-MOR, vol II, p409 March 3, 1987.

Specific problems of the cereal sector

Budgetary costs

The cereal intervention system was intended to be largely self-financing, with the revenue side of the ONICL's budget provided by variable levies on soft wheat imports. From 1970, these revenues were insufficient to wholly finance the consumer subsidy and thus ONICL required transfers from the Treasury, which soared from 135million DH in 1973⁴⁴ to reach a peak of 1407million DH in 1985. The increase in the subsidy bill was mainly due to the widening of the gap between producer and consumer prices, which occurred during ASAL I, as consumer prices have declined in real terms since 1975⁴⁵. It was also a consequence of a greater self-sufficiency rate, which reduced the revenue provided by import levies.

In summary, policy objectives, viz: greater self-sufficiency, low consumer prices and the financing of consumer and producer subsidies from import levies, were incompatible. That the ONICL system had been largely self-financing was the result a fortunate conjuncture, in which the revenue yielded by the variable levy (the difference between then domestic producer price and the world prices multiplied by import volume) had broadly equated to the ONICL's requirement for financial transfers to support a policy which required low consumer prices and high producer prices. The success of the cereal policy in production terms (see Figure 10) rendered it politically more vulnerable, as a greater proportion of support had to come through budgetary subsidies, a form of support which was transparent, and therefore vulnerable⁴⁶.

Inefficiencies of the system

The state control of the cereal pricing and marketing system fostered a number of inefficiencies. First, the system excluded competition in marketing and processing⁴⁷. Mills whose production costs were below the margin granted by ONICL received economic rents which were secure and not vulnerable to processes of competition and price adjustment. Thus productivity gains made by the millers were not transferred to consumers or producers.

A major problem was the unevenness of the geographical coverage of ONICL purchasing and storage capacity. This induced differential access to official prices, which favoured those producers close to procurement centres and/or which could offer larger quantities or better quality for sale. Farmers in remote areas (mainly rainfed producers) tended to have to sell their grain onto free markets, receiving a lower price. Thus there is strong evidence that the producer subsidy accrues mainly

44 Refer to table 1, page 8.

45 The price of subsidised soft wheat flour (*farine nationale*) has declined from 2.55 DH/Kg in 1975 to 1.33 DH/Kg in 1988, in real terms (base 1989=100)- (source ONICL statistics)

46 In comparison, two arguments which depend more on economic theory, and therefore may have lower credibility with policy makers are: (i) the efficiency losses of supporting domestic prices above world prices; (ii) the Treasury foregoing from its general revenue the funds yielded by the variable levy.

47 The price of flour is fixed by the government: there is no competition between millers to increase their market shares. Moreover, the procurement of grain is organised by ONICL at fixed price, therefore, there is no competition on raw material procurement.

to better-off producers.

Laraki (1989) has argued that the consumer subsidy on soft wheat flour is income regressive⁴⁸ and that a system of targeted subsidy would be much preferable. His suggestion is to subsidise inferior goods such as barley flour⁴⁹.

Cereal sector reform: objectives, implementation and issues

The liberalisation programme

The cereal sector reform programme set out in the ASAL-II documents was based on the conclusions of the World Bank "Price and Incentive Study" of 1987. The strategic objective was a staged restructuring of the price and marketing system to achieve a complete liberalisation of the cereal market (domestic and imports) by the end of 1992. The detailed conditions included the gradual elimination of the consumer subsidy on the low quality flour (*farine nationale*); deregulation of the marketing of soft wheat upstream of the flourmills; liberalisation of international transactions for *all* grains and introduction for all grains of a *reference price system* linking the domestic price to the world market price with an appropriate protection rate. In 1990, the target for liberalisation was postponed by mutual agreement between the Moroccan government and the World Bank

In a first instance, it was agreed that the *reference price* for soft wheat should be calculated as a five year moving average of the world price, this to be increased by 25% to provide a level of protection in line with that granted to import-substituting industry (as determined in ITPAL-I and ITPAL-II). The difference between the world price and the reference price would be paid by the importers to ONICL as a variable import levy. The domestic market would then clear at around this reference import price. A safety clause was negotiated by the government which stipulated that, should the *reference price* fall below the producer price of 1986 adjusted for inflation, then the reference price would be calculated on the basis of the latter.

Implementation of the reforms

An excellent harvest in 1988 exposed shortcomings of the existing intervention by reducing import levy revenue and increasing need for government subsidies, giving impetus to agricultural policy reform. Two changes took place: first, the support price system for barley, hard wheat and maize was terminated in August 1988. In other words, the domestic market for cereals other than soft wheat was entirely liberalised. Second, the consumer subsidy was reduced. The price of low quality flour (*farine nationale*) was increased from 1320 DH to 1520 DH per tonne and the quantity of subsidised flour was limited to one million tonnes annually.

48 He has calculated that low income households benefit only from 20.4% of the subsidy on soft wheat flour (4.3% for rural households and 16.1% for urban households) whilst better-off household benefit from the remaining 79.6% of the subsidy (Working paper LSMS,1989,p29). This is due to the fact that they buy less soft wheat flour than better-off household (self consumption)

49 This is not a straightforward solution because barley is also used for animal consumption. A subsidy on barley price might create distortions in the meat and dairy market.

These reforms resulted in substantial savings for the budget. Moreover, the government's withdrawal from involvement in barley, hard wheat and maize freed storage capacities for soft wheat, making the soft wheat support system more effective.

Delays in implementation of ASAL-II

Due to a decline in world prices the *reference price system* failed to establish a link between domestic prices and world market prices. The *safety clause* was applied from the first year of the reform and, since 1989, the minimum guaranteed producer price (that real prices should be no lower than in 1986) has exceeded the calculated reference price. In consequence, it appears that cereal producers are now receiving higher levels of protection than import substituting industry (whose protection has been eroded by a series of reforms under the ITPALs). Thus, if the objective of linking domestic and world market prices is to be achieved, either world prices will need to rise, or the *safety clause* price will have to be lowered or removed.

As of 1991, there had been little progress in the implementation of the agreed objective of liberalising the domestic market for soft wheat. Studies were underway to develop proposals acceptable to the government and the World Bank.

It was agreed in ASAL-II that the system of control by ONICL of foreign trade in cereals should be abandoned, but no agreement was reached on the marketing system which would take over. In the context of continued use of variable levies, the complete liberalisation and privatisation of foreign trade raises the issue of import fraud. Given the large quantities of soft wheat imported and the high level of import levy, potential profits from frauds are substantial⁵⁰, and importers have weak incentives to match prices and qualities of imports to consumer demand.

Three points arise questioning the benefits expected from the implementation of the reform package: (i) the potential gainers and losers of the new system; (ii) the implementation constraints; and (iii) the consistency of the reform, in particular in relation with policies pursued in other subsectors and within the general macroeconomic context. These are set out in Table 4.

50 A system under which private traders are free to import, subject to a variable import levy, creates scope for the importer and his supplier to collude to overstate the import price, in order to reduce the share of the margin between the true import price and the *reference price* which is paid as a variable levy. The balance of the margin is a rent to be shared between the importer and his supplier. Of course, the possibility of fraud is created by the variable levy, not by liberalisation of importing, and fraud can exist under public sector management of variable levies.

TABLE 4: Effects on efficiency, gainers, losers and implementation constraints of policy measures in the cereal subsector

POLICY MEASURES	Effects on efficiency	Losers	Gainers	Implementation constraint	Consistency with other reforms
Elimination of consumer subsidy	reorientation of consumption towards substitute like barley	all consumers especially poor consumers in urban area	reduction of budget deficit	political and social resistance to food price increases	consistent with a general policy of reduction of non targeted consumer subsidy
Reference import price equal to average world prices incremented by a 25% protection tariff	eliminate partially distortion by levelling across sectors the protection rate; longer-run efficiency gains from lower prices and flexible response to world market	No obvious gainer or loser: it depends on the level of world prices.	However, higher instability of producer prices: higher risks	reach an agreement on exact procedures for calculating this price	similar reforms were supposed to take place in the sugar and vegetable oil sector
Removal of ONICL monopoly on soft wheat imports and implementation of a variable import levy system	promotes competition amongst private traders		private traders; millers & (indirectly) consumers	fraud: traders may declare higher import prices than those actually paid to reduce the levy	not fulfilling GATT rules
Removal of the official marketing channel for soft wheat	increased efficiency in soft wheat procurement	big producers who benefitted from subsidised prices	small producers	transition to a new role for ONICL (holder of food security stocks & intervention to "smooth" market price fluctuation ?); substantial losses in public sector employment possible.	consistent with liberalisation objectives

THE SUGAR SUBSECTOR: STRUCTURE, POLICIES AND ISSUES IN REFORM

Structure of demand and supply

Sugar consumption in Morocco is high (around 30 Kg per capita per year) and sugar takes a relatively high proportion of household food budgets, especially in rural areas. More than 60% of sugar is consumed as traditional sugar loaf with granulated sugar being used by the food industry and urban consumers.

As noted, the sugar industry was created from scratch in the early 1960s and promoted by large public investments in irrigation and processing and a pricing and marketing system under state control. By 1990, annual production was 490 000 tonnes of white sugar per year, covering 65% of domestic demand. About 275000 tonnes a year of raw sugar are imported and refined within Morocco.

Sugar crop production is concentrated in five large scale irrigation schemes⁵¹ which are closely supervised by the public irrigation agencies (ORMVAs). Producers are required to follow cropping patterns set by their ORMVA, the rationale for this being to optimise the management of water (especially to organise water releases) and to ensure that sugarmills get a steady supply of raw material. Growers receive a guaranteed pan-territorial price, fixed by an Interministerial Commission at the beginning of the growing season. The ORMVAs supply inputs.

Sugar processing consists of extraction (producing raw sugar from sugarbeet or sugarcane) and refining (which produces white sugar from raw sugar). Currently Morocco's extraction capacity is 6 sugarmills and 7 integrated sugarmill-refineries. The rate of capacity utilisation varies widely from year to year and from mill to mill, mainly because of under-supply of raw material. There are three refineries, but COSUMAR in Casablanca processes 90% of the total quantity⁵².

The consumer price of sugar is a subsidised pan-territorial price. In other words, sugar is sold to the consumers at a price which does not cover the costs of production (price of sugarbeet or sugarcane + transformation costs) in Morocco. The consumer subsidy results from the double necessity to pay high prices to agricultural producers and processors to encourage the production, and to maintain low consumer prices⁵³. The consumer price is fixed after negotiations between different

51 Sugar crops are produced in the following five irrigation scheme: Gharb, Loukkos, Doukkalas, Tadla and Moulouya.

52

Mills and mill-refineries in Morocco, classified by irrigation schemes are as shown:

	MILLS		MILL-REFINERIES		
	Beet	Cane	Beet	Cane	Beet & Cane
GHARB	SUNAG-K SUNAG-T	SUNACAS	SUNAB	SURAC	-
MOULOUYA	-	-	-	-	SUCRAFOR
TADLA	SUBM SUNAT	-	SUTA	-	-
LOUKKOS	-	-	SUNABEL	SUCRAL	-
DOUKKALAS	DOUKKALA	-	ZENMARA	-	-

53 In contrast to the situation in the EEC, the Moroccan consumer is not rich enough to pay for the producer support price.

ministries. It is a "political price", which reflects a balance of social, economic and budgetary tensions rather than trends in costs of production or changes in the world price of sugar.

The price and policy framework for sugar processing

The processing and marketing of sugar takes place within a price framework determined entirely by the government. As noted earlier, the controlled producer and consumer prices have not, in general, allowed margins sufficient to cover the costs of the processing system (milling and refining). Thus a stabilisation fund, *La Caisse de Compensation* makes payments which are designed to compensate processors for the inadequacy of the margins allowed by official prices.

In detail, the operation of *La Caisse de Compensation* varies between the two processing systems in operation in Morocco: the first processing system separates the two operations of milling and refining. It involves transport of raw sugar from the sugarmills to the refineries. It is less efficient (more costly in energy) than the processing system which integrates milling and refining in one single stage (performed by mill-refineries).

As Figure 13 shows, in the first system, the "into-refinery" price of raw sugar is set at a level which is calculated to allow refineries adequate margins, and therefore it is the mills which have to operate within inadequate margins, requiring compensation from *La Caisse*. The compensation is based on the difference between the actual "into-refinery" price, and a calculated full-cost price (*prix de cession définitif*) which is calculated on the basis of average costs of production of a standard sugar-mill. Thus, the compensation does not vary between mills.

Integrated mills/refineries enjoy a different subsidy system being individually compensated by the *Caisse de Compensation* on the basis of their effective costs of production plus a fixed profit rate.

The refinery COSUMAR in Casablanca refines also imported raw sugar: a system of variable levies ensures that the imported raw sugar is paid at the same price as the domestically produced sugar. It is enforced by the "*Office National du Thé et du Sucre (ONTS)*" which holds monopoly control on sugar imports. Levies on imported raw sugar are repaid to the *Caisse de Compensation*

The basis on which the domestic sugar industry is subsidised bears similarities to that for cereals. It was the government's hope that the revenue gained by the *Caisse de Compensation* from variable levies on imports should cover the costs of its subsidies to the domestic production system. However, this has not worked out in practice and budget outlays for the subsidy to the sugar system amounted to 516 million dirhams for the year 1990.

FIGURE 16: The sugar price support system

Sugar crops
Farm gate price Pp

sugarmills

$P_{cm}-P_r$

Imports

P_r-P_m

Caisse de
Compensation

Raw Sugar
Into-refinery price Pr
($P_r=P_c-M$)

ONTS

$P_{cr}-P_c$

Mill/refineries

refineries

Refined sugar
Consumer price Pc

Notes:

- 1: M is a calculated refining margin. It is based on real costs and is negotiated between the three refineries and the *Caisse de Compensation* each year
- 2: P_c and P_p are fixed annually by an Interministerial Commission. They are guaranteed pan-territorial prices
- 3: P_{cm} is defined after negotiations between the mills and the *Caisse de Compensation*: it is a price for raw sugar taking account of all costs of production and it is calculated on the basis of a notional standard mill.
- 4: P_{cr} is different for each mill/refinery. It is defined after individual negotiations between each mill/refinery and the *Caisse de Compensation*. It is calculated on the basis of actual costs of production and for a guaranteed level of profit.
- 5: P_m is the import price for raw sugar; $P_r - P_m$ is the variable import levy.

Specific issues faced by the sugar industry in Morocco

Variations in production costs

The sugar industry is the most highly capitalised component of Moroccan

agriculture: it requires huge investments to produce a low value-added product. Moreover, milling activity is seasonal (less than three months in a year) and is entirely reliant on the agricultural production of sugarbeet and sugarcane.

The real costs of production differ substantially from one sugarmill to another and also from one year to another. The two main factors responsible for this variability are the rate of use of the available capacity and the burden of provision for depreciation and financial costs⁵⁴.

TABLE 5: Costs of production of raw sugar (including cost of raw material) in equivalent refined sugar for different sugar mills in 1988 and 1989 (DH/tonne)

MILL	<u>Production cost of raw sugar (refined equivalent)</u>			
	Including financial costs and amortization (DH/ton)		Excluding financial costs and amortization (DH/ton)	
	<u>1988</u>	<u>1989</u>	<u>1988</u>	<u>1989</u>
SUNACAS	3720	4102	3063	3432
SUBM	3126	3522	2820	3113
DOUKKALA	2882	3117	non available	
SUNAG	3457	3725	3315	3503

54 The costs vary with the size of the initial investment, the age of the sugarmill and the amount of the current debt.

Table 6: Costs of production of refined sugar (including cost of raw material) for different mills-refineries in 1988 and 1989 (DH/tonne)

	<u>Production cost of refined sugar</u>			
	Including financial costs and amortization (DH/ton)		Excluding financial costs and amortization (DH/ton)	
	<u>1988</u>	<u>1989</u>	<u>1988</u>	<u>1989</u>
SUNAB	3563	4372	3445	4218
SUNABEL	3817	3759	3154	3736
ZENMARA	3830	4087	non available	
SURAC	3848	4316	2988	3264
SUCRAL	5876	6335	3402	3860
SUCRAFOR	4410	4512	3801	4001

Source: *Association des Producteurs de Sucre* (APS statistiques)

Costs of production are highly correlated with capacity utilisation, due to the large share of fixed costs in the cost structure and the indivisibility of some technical operations. A commonly given explanation for capacity underutilisation is the chronic under-supply of beet and cane. An alternative view is that there has been excess investment in processing capacity, far above the agricultural potential. Thus the gap between planned and actual production of raw material has been a consequence of delays in infrastructural investment (notably irrigation equipment) and lower than expected yields.

Low yields cannot be blamed entirely on the weather. Compulsory cropping patterns, imposed on producers by ORMVA management, and fixed prices, may act as strong disincentives for the producer. Moreover, it has been observed producers consider sugar crops as "hostage crops"⁵⁵ because of the practice of ORMVAs of recovering water charges and payment of other services by deduction from payments due to farmers for delivery of the sugar crops. In circumstances in which arrears on water charges have been widespread and tolerated, farmers have not been prepared to increase production of a crop the extra-revenue of which is simply used to repay debts which would not otherwise be recovered⁵⁶. This difficulty was accentuated in 1987, when fertiliser prices were increased and efforts to recover water charges were stepped-up, while producer prices for sugarbeet and sugarcane were frozen in real terms.

55 " *Plante otage*" (Etude de Mars and co, 1985).

56 Until recently, it was commonly accepted that charge recovery was low: if the farmer could not pay, his debt was written off. In such circumstances, it was in the farmers' interest to demonstrate an inability to pay by minimising outlays labour on sugar crop fields.

Deficiencies in incentives for efficiency

The system of controlled prices and subventions, based on reimbursing the costs of different mills and guaranteeing them a fixed level of profit, provides weak incentives to increase productivity. There are strong grounds for arguing that the introduction of incentives for cost reduction, through competition for prices and market shares could lead to substantial gains in efficiency. Gains are likely to be realisable in the use of energy and labour and in beet production.

Excessive financial costs are born by sugarmills because of delays in the *Caisse*'s payments which have left them with serious cash-flow difficulties. This has resulted in late payments to farmers (sometimes more than 4 months after delivery) which has been another cause of producers' ambiguous attitude towards sugar crops. Additionally, processors have been forced to borrow from the commercial bank. In the case of integrated mill/refineries, additional financial costs were recovered from the *Caisse de Compensation* (and indirectly from taxpayers) through a increases in the negotiated full-cost price (Pcr in Figure 16 above), to cover financing charges. However, mill management have experienced much more difficulty in attempting to convince the *Caisse* that the full-cost price (Pcm) should be increased. Consequently, they have used up their provision for amortization to pay-off debts, leading a rapid decline in the net worth of the mills, a financial situation which is not sustainable.

In the case of certain sugarmills, particularly the oldest, it has been argued that the compensation (guaranteeing a theoretical remuneration of capital of 12%) was not sufficient to cover the investment needs for renewal of the equipment.

Competitive advantage: should Morocco reduce sugar production?

There is on-going debate about the justification for the current volume of sugar production. It has been argued, on the basis of low world prices for sugar, that Morocco has higher competitive advantage in other crops and that it would achieve a better resource allocation and higher national income by redeploying resources freed by the reduction of sugar output to higher value activity and satisfying supply by importing more sugar at the world market price.

However, there are arguments in favour of continuing with the existing volume of sugar production. It is argued that self-sufficiency objective is a political objective which can be traded-off with efficiency objectives. But there are also arguments based in economics. It is pointed out that the world market for sugar is a residual market, where prices are artificially low and extremely volatile. Thus encouraging domestic production to shrink to the level implied by the present world price would be an extremely risky policy. While this argument has considerable force, it does not necessarily justify the present level of protection afforded to the sugar industry. It is also pointed out that sugar production was developed to "*mettre en valeur*" investments in irrigation equipment and to justify the extension of public sector irrigation capacity. This argument depends on, among other factors, the profitability of alternative crops which could replace sugar crops and also the shares in the cost structures of production and milling of fixed and variable costs (the former being "sunk").

Studies of the sugar sector have concluded that, given appropriate reforms,

Morocco's sugar industry has good prospects of becoming internationally competitive, in the sense of producing at costs comparable with "best practice" elsewhere in the world (but, nevertheless, above current world prices). The thrust of the reform recommendations are that the domestic market be deregulated and the low performance units restructured⁵⁷.

Reform proposals for the sugar subsector

Reform proposals were the outcome of a series of expert reports and long negotiations with the World Bank, described in the "Optimisation Plan of the Sugar Sector"⁵⁸. Thus, under the reform, actions were to take place in three stages:

First a phase of "*remise a niveau*" (levelling-up), i.e., a five-year programme of new investment and rehabilitation to modernise sugarmills and to expand the irrigated area three ORMVAs.

Second, a *deregulation phase*, the medium term objective of which was the elimination of all regulatory controls on price formation. As a transitional step, the system of cost-plus margin was to be replaced by a system of fixed reference price for raw sugar and an unique refining margin. A variable levy mechanism would ensure that imports are not available on the domestic market at a price below this reference price. The monopoly control of ONTS would be removed and the private sector would be allowed to import sugar.

Third, the privatisation of the milling and refining units.

Implementation of sugar reform

Though these proposals seem sound in principle, slow progress in implementation raises questions concerning the appropriateness of the proposed sequence, the extent of government commitment and the World Bank's capacity for obtaining compliance. Legislation was enacted⁵⁹ in 1990 proclaiming that import substitute staples (soft wheat, sugar and cereals) would be protected by a system of reference price calculated on a world price basis, coupled with variable import levies. Disagreements between the government and the World Bank over the appropriate basis for calculating the *reference price* have proved a major obstacle to progress and have delayed the implementation of the new regulation: As the *reference price* determines the domestic price, it is of great importance to the sugar industry but, as it is not determined by the market, it is thus a political price. At the latest stage of the negotiations, it was agreed that the reference price would be the average world price for raw sugar since 1950 (in real terms), adjusted for transport costs. It would be then

57 The study by Landell Mills (1989) shows that Moroccan sugar production could compete with international production if the conditions of a competitive world market for sugar were respected, in other words, if the world price reflected the true production costs of sugar.

58 *Plan d'Optimisation du Secteur Sucrier*, released in 1988.

59 *Loi sur le Commerce Exterieur* 1990

hardly sensitive to recent price changes and would be in effect a fixed guaranteed price. Thus the proposed reference price provided for little change in the level of protection which the sugar industry had enjoyed from the previous system of subventions and guaranteed prices. The implications is that, at this stage, the government was not serious in its stated intention to reduce protection. In fact. the World Bank came to this conclusion and suspended the negotiations on the sugar sector in 1991.

In theory, domestic marketing deregulation implies theoretically free determination of sugar crop prices and of consumer prices⁶⁰. On the consumer side, it requires that the government remove consumer subsidy, but, as of 1991, it seemed unlikely that such a decision will be taken in the short term. Thus the outlook is for a difficult transition period, with the maintenance of a fixed pan-territorial consumer undermining the development of effective competition (for example in terms of market shares) between the processing firms. On the producer side, deregulation involves the removal of the fixed pan-territorial price for sugarbeet and sugarcane and the setting up of a negotiation process between sugarmills and producers. To make it possible, a profound institutional reform is necessary⁶¹.

There are also difficulties in the international trade aspects of the liberalisation. Imports of raw sugar will be substantial in the next few years, and it is likely that annually more than 250000 tonnes of raw sugar will be imported by private traders, raising the possibility of over-invoicing to reduce the variable levy. Finally, although privatisation of sugar mills is an explicit medium term goal of the reform, there are doubts about the government's commitment: the government has not undertaken the levelling up programme, which was supposed to modernise the oldest units in order to make them economically attractive to potential private buyers.

ADJUSTMENT AND POVERTY

With a GDP per capita of \$880 in 1989 (World Development Report, 1991), Morocco is among the poorer of the middle-income economies group, although the rate of economic growth in the last 25 years has been slightly faster than the group average⁶². Despite this comparatively good economic performance, income distribution patterns and status indicators reveal that Morocco remains a country of strong social

60 The processors will take into account the reference price of raw sugar, the supply curve of agricultural producers and the demand curve of consumers to allocate their resources and define their marketing strategy in order to maximise profit.

61 From 1990 a major institutional reform had begun within the framework of the *disengagement* movement. Sugarmills have taken over ORMVAs activities related to sugar, seeds and chemical distribution, credit supply, harvesting and transport to the mill. However, ORMVAs will retain control of a key input, water supply, and thus will remain a powerful intermediary between the sugarmill and the producers.

62 The average annual growth rate between 1965 and 1989 Was 2.3% in Morocco and 2% for the lower middle income countries group (*World Development Report 1991*)

inequalities. Morrisson (1991) estimates that about 30% of the population were below the poverty threshold in 1985. Education and health indicators are worse than some countries with similar income levels: only 58% of children enrol in primary school and the infant mortality rate is 69 per 1000 live births⁶³.

One reason for the high level of absolute poverty is that post-Independence budgetary policies gave priority to productive investments over social expenditures, resulting in poor educational and health services, particularly in rural areas. It may be hypothesised that income distribution was further skewed by the trade and price controls which characterised the early policy response to the macroeconomic imbalances which followed the collapse of the phosphate boom. The resulting overvaluation of the exchange rate may have transferred income to urban consumers, while the prevalence of scarcity rents would have benefited a favoured few.

Income level and social expenditure in the 1980s

Aggregate figures for the 1980s are not suggestive of a decline in the purchasing power of wages: Table 7 shows that the real value of wages (mainly but not exclusively accruing to urban households) increased by about a quarter over 1982 to 1989. Trends in the purchasing power of rural households are more difficult to assess but Morrisson (1991,p97) estimates that the circumstances of rural households generally improved.

TABLE 7: Evolution of purchasing power of the urban population from 1982 to 1989 (indices with base year: 1985=100)

Year	Wage Index WI	Consumer Price Index CPI	WI/CPI in urban area
1982	69.8	77.7	89.8
1983	75.9	82.6	91.9
1984	91.0	92.8	98.1
1985	100.0	100.0	100.0
1986	109.8	108.7	100.9
1987	109.8	111.7	98.3
1988	127.7	114.3	105.5
1989	132.7	117.9	112.5

63 As a matter of comparison, Zimbabwe and The Dominican Republic with GDP per capita of, respectively, \$650 and \$790 display a percentage of children enrolment in primary school of 100% and 73% and an infant mortality rate of 46 and 61 PER 1000 live births.

This evidence suggests that over the 1980s Morocco was able to correct macroeconomic imbalances without reducing the purchasing power of wage earners. Favourable exogenous factors (in particular, good rainfall in five years out of eight) have been important determinants of this outcome. However, the choice and the timing of stabilisation measures can also be important. By using a computable general equilibrium model linking macroeconomic variables to microeconomic indicators Morrisson (1991) made a series of simulations involving different sets of stabilisation measures to achieve the same macroeconomic objectives. This demonstrates that it is possible to find an optimal set of measures which minimises the social costs of stabilisation in terms of three indicators: unemployment, income inequality and poverty. Morrisson concludes that the two pro-poor measures, both of which were implemented in the 1980s, are devaluation and reduction of real wages in the public sector. However, Morrisson's approach⁶⁴ does not incorporate the value of social spending: in 1989, social spending per capita was still below the 1983 level (table 8).

TABLE 8: Public spending on health and education services, 1984 to 1989, in constant \$ (1985) per capita

Years	Health	Education	Total
1989	21.5	121.6	143.1
1988	20.8	118	138.8
1987	15.3	89.3	104.6
1986	15.0	89.0	104
1985	17.4	107.5	124.9
1984	23.1	133.5	155.6

It is possible that particular groups have suffered disproportionately from economic reforms. Two reforms which are likely to have had a concentrated impact are the reduction of consumption subsidies and tight employment and incomes policies in the public sector. Public sector employment has been sharply reduced⁶⁵ and real public sector wages have declined⁶⁶. In particular, the government abandoned the policy of offering a job to university graduates, which had artificially swollen the public sector. This measure contributed to an increase in the rate of

64 As Morrisson himself emphasises, the model has shortcomings: it does not take account of the long term effects of the measures implemented and overlooks the potential redistributory effects of public spending. In other words, it does not incorporate the fact that households' welfare is affected by purchasing power and by the quality of accessible social services, the latter being directly related to social public expenditures. Morocco's social spending was significantly reduced over the first half of the eighties.

65 In 1982, the number of civil servants was 434000 in urban areas, representing 16.5% of the active urban population. In 1989, these two figures had dropped respectively to 356000 and 11.8%. (*Annuaire Statistiques du Maroc*.)

66 Morrisson's (1991, p135) shows that the purchasing power of public sector workers was reduced by almost 20% between 1980 and 1986.

unemployment among urban 15 to 24 year olds from 17.8% in 1982 to 30.9% in 1989. The educated young unemployed are a politically sensitive social group, who tend to trigger civil unrest when price increases are announced. Therefore, they play an indirect role in the negotiations over food subsidies.

Consumer subsidies and poverty

The first attempt to reduce food subsidies was made in May 1981, under the EFF agreement with IMF. The announcement of steep increases in the prices of dairy products, cooking oil, sugar and flour sparked violent protests, which compelled the government to scale back the increases. Although subsidies on milk and butter were progressively eliminated between 1982 and 1985, subsidies on sugar, cooking oil and bread flour remained. Further moves towards subsidy removal were perceived by the government as a potential source of political instability, and it was reluctant to allow consumer subsidies onto the agenda of negotiations with the World Bank. However, the World Bank and the Ministry of Finance continued to exert pressure for removal of food subsidies, motivated by the necessity to deal with an unsustainable budget deficit. Thus, in 1987, the government conceded that consumer subsidies on sugar, flour and cooking oil would be gradually removed within the programme of agricultural market liberalisation agreed under ASAP II. The ASAP II also included proposals for targeted compensatory programmes to protect low income groups from the effects of consumer price increases (World Bank, 1987, p77).

It has been argued by an number of observers, e.g., Laraki (1988), that consumer subsidies were an alternative to tackling the fundamental problems of low urban purchasing power (due to artificially maintained low wages) and low agricultural productivity. The recurrent costs of food subsidies drain budget resources which could be more effectively deployed in improving efficiency in the agricultural sector, in investing in the rural physical infrastructure and in social spending. However, the most telling argument against food subsidies is that they are not targeted, and disproportionately benefit richer groups. Analysis of consumption patterns shows that the share of the total subsidy which goes to middle and high income groups is greater than their share in the population [see figures 17 (i), (ii) & (iii)]. This is due to the fact that the rich spend more on food in absolute terms, even if, for the poor, food expenditures represent a higher share of expenditure. Moreover, cooking oil, sugar and bread are not inferior goods in Morocco, because their consumption does not decline much when income rises. Nevertheless, a crude calculation shows that the poor will lose a higher share of their purchasing power if food subsidies are removed. Using the results of the National Household Consumption Survey of 1984-1985, it is possible to approximate the effects of a 50% increase in the retail price of soft wheat flour, sugar and cooking oil (assuming that demand elasticity for these three basic food products is close to zero). The table 9 shows that in the low income group, will have to reduce consumption on other items (food and non food) by an average of 6% while the high income group will only have to reduce consumption by an average of 4%.

FIGURES 17

TABLE 9: The effects on expenditure patterns of a 50% increase in the price of subsidised foods (soft wheat, vegetable oil and sugar)

Note: all the calculations are made in DH per capita per year

	RURAL HIGH	RURAL LOW	URBAN HIGH	URBAN MIDDLE	URBAN LOW
Total Consumption Expenditure (DH/Cap/Year), of which:	3451	1532	8611	4009	2369
Expenditure on Soft Wheat	65	52	136	89	101
Expenditure on Veg. Oil	110	56	209	126	88
Expenditure on Sugar	161	91	224	148	111
Total Expenditure. on subsidised food (soft wheat, veg. oil & sugar)	335	200	569	364	301
% of total consumption expenditure on the three subsidised products (soft wheat, veg. oil & sugar)	9.7	13	6.6	9.1	12.7
% of total consumption expenditure accounted for by the three subsidised products, if there were a 50% increase in price of subsidised products	14.6	19.6	9.9	13.6	19.1

Compensatory programmes

There is agreement between government and external agencies that targeted compensatory programmes are necessary to alleviate the burden of higher food prices, increased unemployment and reduced social expenditure. In the last five years, two worldwide US food programmes ("Title 1" and "Title 2") have been active in Morocco: "Title 1" is balance of payments and budget assistance, under which food is sold to private importers and the domestic currency thus raised is used to finance projects in rainfed areas. However, there are doubts as to the effectiveness of this programme in stimulating additional funding for investment in poor rural areas. "Title 2" is a food distribution programme, which amounted to US\$ 10 million annually until 1987. In 1987, the US agreed with Morocco to phase out "Title 2" and to replace it with a grant of the equivalent of US\$ 70 million in food over 1987 to 1990, to be distributed through government channels for poverty relief. This US food aid was to be part of the Compensatory Programme for poor households adversely affected by policy reforms.

Three ministries are involved in the Compensatory Programme. The Ministry of Handicraft and Social Affairs distributes food to targeted groups: e.g., mother and child programmes based in nutrition centres in urban and semi-urban areas (300000 children and 150000 mothers), orphanages (33 000 children), training centres (170000 children) and handicraft family cooperatives (36000 families). Between 1987 and 1990, 174000 tons of food were distributed to these targeted groups and 63000 tons of wheat were sold at a reduced price. The Ministry of Interior manages food-for-work programmes undertaking urban sanitation, reforestation, rural roads and water projects, in which, over 1987-90, 36000 tons were distributed and 100 000 people participated. The Ministry of Public Health distributed milk to local associations and, until 1988, the Ministry of Agriculture organised a programme compensating farmers for planting fruit trees on their land.

US support to the Compensatory Programme was extended after 1990 but limited to the levels of US\$ 5 million in 1991 and US\$ 2.5 million in 1992, on the grounds that poorer countries need help more urgently and that a greater share of compensatory expenditures should be domestically financed, with funds released by the reduction of general food subsidies. In summary, the programme of targeted compensation for the social costs of adjustment has been modest in scope and appears to attract little domestic political support. The government's political concerns are focused on the effects of subsidy reduction on volatile urban groups. The ASAL II programme of 1987 contained proposals for a reinforced compensatory programme, but, as of 1991, this had not become operational.

CONCLUSIONS: THE CONSISTENCY OF ADJUSTMENT IN MOROCCO

1. This paper is an account of the agricultural and rural dimensions of a delicate process of economic policy change. The impetus to policy reform came from external pressures on a government which had become vulnerable to these pressures as a result of a foreign exchange and indebtedness crisis. Morocco is a state with substantial geopolitical significance: the countries of the European Community and also the United States have a strong interest in maintenance of social peace, political stability and a pro-Western orientation. This gives the government considerable bargaining power, particularly in resisting proposals which could provoke social unrest. The agricultural and food sectors are, perhaps, the most politically sensitive parts of the Moroccan economy, because of the implications for consumer prices and farmer incomes. It should also be noted that the agriculture sector contains the show-pieces of the import substitution strategy (irrigated agriculture and associated agro-processing), production capacity which the government is reluctant to restructure and cut-back.

2. Reform has been led by conventional measures of economic stabilisation (changes in exchange rates, interest rates, the budget balance), followed by quite penetrating changes in industrial policy and in the protection of industry. The macroeconomic stabilisation and industrial and trade reform aspects of the adjustment process appear, on the evidence available so far, to be a success. The general economic climate is stable, as evidenced by relatively low rates of inflation, and a balance of payments account which has proved manageable within more a more liberal international trade and payments regime.

These reforms aimed at increasing the efficiency of the industrial sector should have useful benefits for the agricultural and rural sectors, by improving quality and lowering real prices in the markets faced by rural producers and consumers. Furthermore, if these reforms succeed in bringing about a sustained increase in the rate of growth of the industrial sector (in particular by nurturing a competitive advantage in industry), then this should have beneficial effects on the rural sector (creating employment within the country, lowering further the cost of industrial goods due to economies of scale).

3. Agricultural reform has moved more slowly. The government's track record suggests that it has not had a whole-hearted commitment to liberalisation. The reforms have been driven mainly by budgetary pressures emanating from the macroeconomic crisis. Proposals from policy-based lending for the agricultural sector seem to have taken second place to the imperatives of macroeconomic stabilisation as a source of pressure for reform (the government being able to plead the extreme sensitivity of matters related to food prices).

4. The two foundations of the World Bank-recommended liberalisation programme have been:

First, the gradual decontrol of domestic markets. This has involved attempts to dismantle marketing boards, reduce producer and consumer subsidies and promote domestic competition. Accompanying this have been proposals for institutional reform, notably the privatisation of activities formerly performed by the public sector (especially in irrigated areas).

Second, the standardisation of the protection system for import-substituting products, i.e., a *reference import price* (set up under a variable import levy regime) to be calculated on the basis of the world price plus a margin for protection. Thus, the reference price is the price at which domestic production competes with imports. The system of reference price is more transparent than the system of quotas. By transmitting, to a certain extent, the signals of world prices fluctuations to domestic producers and domestic consumers, the *reference price system* promotes a reallocation of resources better reflecting the competitive advantages of the country. Moreover, it should achieve a significant reduction of intrasectoral and intersectoral distortions by standardising the protection rate across products in the agricultural sector, and in a second phase across sectors.

5. However, despite pressures from the World Bank on the Moroccan government to accelerate the process of legal enforcement and implementation of the reform package, the Moroccan government has been delaying the decision making process and has not taken any firm action yet. The only reforms to have been carried through, so far have been:

(i) the early stages of an institutional reform in the ORMVAs aimed at handing over to the private sector the commercial activities which were performed by the ORMVA staff (input distribution, health services..). Implementation of this reform has been uneven and has been resisted in certain irrigation schemes.

(ii) reduction of consumer subsidies: consumer prices have increased significantly in real terms in the last three years, and the amount of subsidised flour has been limited to 1.2 million tonne a year.

(iii) the removal of official floor prices for barley, hard wheat and maize.

(iv) the liberalisation of export channels for agricultural products.

These are not inconsiderable changes, and they have not challenged the basic philosophy of the management of the agricultural sector.

6. A main sticking point between the government and the World Bank has been the government's unwillingness to shift from a system of fixed pan-territorial producer prices, supported by variable levies, to tariffication. The system of *reference price* has so far not proved to be a workable compromise between the positions of the Bank

and of the government. Linkage of domestic markets to the international market is still haphazard. Furthermore, there are inefficiencies associated with variable levies (e.g. weak incentives for merchants to obtain competitive import prices, indeed, positive incentives for fraud). Endless wrangling about the formula for calculating the reference price for sugar and soft wheat demonstrates the weakness of an approach to reform which continues to give central place to pre-season fixed prices guaranteeing the profitability of public investments made in the past. These objections are valid and have generated a great deal of discussion which could challenge the choice of the reference price system in the context of the liberalisation of the agricultural sector in Morocco.

Tariffs have the benefit of providing a fixed level of protection, irrespective of world prices, and also of transmitting to the domestic agricultural sector signals concerning the opportunity costs represented by developments in world markets. They are less amenable to corruption. It has been suggested that protection for import substituting agriculture could be set at around that for import substituting industry (effective protection of about 1.25). However, the disadvantage is that producers would no longer receive fixed prices, but world prices plus tariff protection. The extent to which exposure to world price trends (with tariff protection) may be a disincentive to agricultural producers is thus an important technical question. A related technical question is the extent to which some variation in tariff levels may be possible, in response to changes in world market prices and, if so, under what rules.

In conclusion, it is important that the Moroccan debate on agricultural liberalisation continues, and that proposals for policy reform continue to be advanced.

7. On poverty: liberalisation is best characterised as necessary but not sufficient condition for effective rural poverty alleviation. Reform is necessary to promote growth, making available to the government budget revenues which could allow more poor-focused expenditure (e.g., improvement in the rural physical infrastructure, more research work on appropriate production technologies). It is also possible that liberalisation could lead to more employment, creating rural linkages (production of vegetables on irrigated schemes previously required to grow industrial crops, possible greater labour intensity of private marketing activity). The issue of land reform is not part of any reform package: it is a very critical issue but politically sensitive. The reduction in food subsidies has ambiguous effects. The fact that richer groups currently benefit disproportionately from the subsidy creates potential for poverty alleviation because funds released could be redeployed in targeted subsidies and longer term investments in the poor. On the other hand, subsidy reduction will bear harshly on poor urban groups, this underlining the importance of tight targeting of any remaining subsidies.

8. The conclusions above show that implementation of agricultural reforms under structural adjustment in Morocco has been limited relative to the ambitions of those who have been urging liberalisation. In a sense, agriculture has been a lagging sector in Morocco's generally quite rapid progress towards a more liberal economy, progress which has resulted from macro, trade and industrial reforms. The reform programme was too ambitious: changing from an interventionist system, insulated from the world market and set up to respond to political objectives (self sufficiency, producer income,

consumer purchasing power, public sector agro-industry), to a market-based system is not an easy task. In the case of Morocco, endless negotiations and compromises have undermined the consistency of the reform and have maybe given rise to accentuated distortions.

Pro-liberalisers could argue that the World Bank has been "too soft" in the agricultural sector. It has granted substantial balance of payments support (this becoming part of the external debt of Morocco) without ensuring that this stimulated a level of reform commensurate with the additional borrowing and the opportunity cost of these resources elsewhere in the economy. From a different perspective, there are those who worry that the reform process has put rural poverty issues "on the back burner". The rural-structural issues such as investment in infrastructure, land reform, technology development, which could directly help the poor, have been neglected.

9. Finally, the paper has argued that the reforms which were carried through were accepted mainly because they provided an immediate relief for the national budget and balance of payments, and not because the government had a whole-hearted commitment to liberalisation. In this sense, it is not certain that World Bank intervention has yet been decisive in shaping agricultural policy. However, one concrete and obvious contribution of the World Bank has been to promote a more analytical approach to agricultural policy within ministries and to bring in new ideas. Moreover, it has demonstrated that a certain amount of discussion could take place and that things could change.

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