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**AGRICULTURAL POLICIES IN MOROCCO: AN HISTORICAL APPROACH TO
EXPLAINING RURAL UNDERDEVELOPMENT**

By

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**A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment
of the requirements for the degree of**

Master of Arts

The Norman Paterson School of International Affairs

**Carleton University
Ottawa, Ontario**

March 20, 2002

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The undersigned hereby recommend to the Faculty of
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ABSTRACT

As in much of the developing world, agriculture features heavily in Morocco's economy. Morocco's agricultural development, however, has been characterized by extreme dualism – an efficient, export-oriented, modern agricultural sector on the one hand, and the much larger traditional sector. This dualistic development has prevented effective poverty alleviation in rural areas, even if agricultural GDP continues to grow. Instead, the traditional sector has remained largely underdeveloped, while the modern, agricultural export industries have enjoyed continued expansion. This paper explores from an historical perspective the agricultural policies that have led to this dualistic development. Tracing the development of Morocco's rural development from before the protectorate regime of 1912, through to the period of structural in the mid-1980s, a continuity becomes apparent in the pattern of rural development in Morocco. Long-standing relationships between the central government and rural areas have interacted with external influences, perpetuating a policy-making environment that favours the rural elite.

TABLE OF CONTENTS

Acceptance Sheet.....	ii
Abstract	iii
Table of Contents	iv
List of Tables.....	v
List of Figures	vi
CHAPTER 1 INTRODUCTION.....	1
1.1 Agriculture in Morocco's Rural Development.....	1
1.2 Agriculture and International Development.....	1
1.3 The Context for Rural Development: The Case of Morocco.....	5
1.4 Chapter Outline	6
CHAPTER 2 Continuity and Change in Morocco: Historical Antecedents in Moroccan Agriculture	8
2.1 Pre-Protectorate Morocco and the <i>Makhzen</i>	8
2.2 The Protectorate	13
2.3 The Agricultural Sector Under the Protectorate.....	14
2.4 Independence and the Politics of Stability	19
2.5 Land Distribution in Independent Morocco	22
CHAPTER 3 Post-Independence Agricultural Policies and their Impact on the Rural Sector	25
3.1 The Plight of the Rural Sector & Efforts to Revive it.....	27
3.2 Plan quinquenal 1960-64.....	30
3.3 Plan Triennal 1965-67 and the Doctrine of Dam Building	36
CHAPTER 4 Citrus Fruit and Cereals: A Comparative Outlook on the Modern Versus Traditional in Moroccan Agriculture	41
CHAPTER 5 The Rural Sector Under Adjustment.....	53
5.1 Morocco's Structural Adjustment Programme	55
5.1 Agricultural Output and Rural Welfare.....	62
CHAPTER 6 CONCLUSION	72
STATISTICAL APPENDICES	77
6.1 APPENDIX I Agriculture and GDP.....	77
6.2 APPENDIX II Agriculture and Trade Figures	78
6.3 APPENDIX III Cereal Production Figures	82
6.4 APPENDIX IV Cereal Trade Figures	84
6.5 APPENDIX V Citrus Production Figures	86
6.6 APPENDIX VI Citrus Trade Figures	88
6.7 APPENDIX VII Population Figures	90
6.8 APPENDIX VIII Irrigation	93
BIBLIOGRAPHY	94

LIST OF TABLES

Table 1.1	Agricultural Output and Employment in the Developing World, 1995	2
Table 2.1	Citrus Production and Exports 1912-1956	17
Table 2.2	Land Reform and Distribution in North Africa	23
Table 3.1	The Importance of Irrigation in the Plan Quinquennal 1960-64	33
Table 3.2	World Bank Recommended Targets for Leading Crops in 1970	37
Table 3.3	Dams Constructed in Morocco between 1956 & 1980	37
Table 3.4	Planned Public Investments in Agriculture 1965-67	39
Table 4.1	Morocco's Agricultural Trade Balance, 1961-1998	45
Table 5.1	Agricultural Production During Adjustment Around the World	56
Table 5.2	Economic Performance Indicators for Morocco, 1982-86	57
Table 5.3	Adjustment Programme Measures in Morocco	58
Table 5.4	Agricultural Performance and Self-Sufficiency in North Africa	61

LIST OF FIGURES

Figure 3.1	Percentage Share of Agriculture in GDP	26
Figure 4.1	Cereal and Citrus Production in the 1970s	42
Figure 4.4	Agricultural Trade Balance (1961-1999)	46
Figure 4.5	Urban and Rural Populations 1961-1999	47
Figure 4.6	Total Cereal Production 1961-2000	50
Figure 4.7	Agricultural Exports and Imports by Value 1961-1999	52

CHAPTER 1 INTRODUCTION

1.1 Agriculture in Morocco's Rural Development

The purpose of this paper is to evaluate agricultural transformation in Morocco's post-independence development. During this period, Morocco experienced significant structural change and market reforms within the broader perspective government policies towards rural development. Throughout these changes, Morocco's agricultural sector has continued to play a vital role in the economy. While Morocco's overall agricultural production has continued to grow since independence, rural poverty remains firmly entrenched throughout the country. This paper will explore the reasons why agricultural growth in Morocco has not had a greater impact on the reduction of rural poverty over the last half-century.

1.2 Agriculture and International Development

Few texts on economic development are written without paying significant attention to agriculture, and its role within the larger context of a developing economy. More than three billion people live in rural areas, most surviving on agricultural pursuits. People living in the country comprise the majority of the population in many developing countries. Of greater significance is the fact that the vast majority of the world's poor live in rural areas. Agriculture, therefore, rightly assumes a position of importance in development theory. In the past fifty years, however, the nature of this role has changed considerably.

Through the 1950s, economic development was simply defined as the transformation of an economy from traditional, subsistence activities to modern, industrial sectors. This definition implied a passive and supportive role for agriculture in the process of economic development. Increased capital stock was the source of growth, and therefore economic development meant, by definition, an emphasis on capital-intensive industrialization. This underlying assumption of the pre-eminence of industry in the process of development produced a generation of inward-looking models of industrial transformation.

By the mid-1960s, however, many were arguing that growth in the developing world was not proceeding quickly enough, and more importantly that the poor were not participating enough in the growth that did occur. Agriculture in particular did not fare well, as agricultural GDP failed to expand, and the share of agricultural output in total GDP declined even more. The performance of agriculture in the developing world becomes even more dubious when the proportion of the population employed in the agricultural sector is taken into consideration (See Table 1.1).

Table 1.1 Agricultural Output and Employment in the Developing World, 1995

<i>Region</i>	<i>% of Labour Force in Agriculture</i>	<i>Output of Agriculture as a % of GDP</i>
South Asia	64	30

East Asia	70	18
Latin America	25	10
Africa	68	20

Source: World Bank, 1987

As a result of the on-going crisis in rural areas throughout the developing world, the central importance of the agricultural sector in the development process was acknowledged. If developing the rural economy was crucial in alleviating rural poverty, the question then became how to effectively promote this development. Opinions on this question, however, differed markedly over the years. All with the objective of promoting rural development, those involved, governments, non-governmental organisations, donor countries, international assistance agencies, often do not agree on the content, concrete function and potential distributive benefits of rural development.¹ The failure of the development policies of the 1950s and 1960s to sufficiently address overall poverty levels produced essentially two divergent lines of argument with regard to the rural sector. I will refer to these as the 'structural approach' and 'market approach,' and will briefly discuss each in turn. Both saw increased output in the rural sectors as the solution to effective development in those areas, but the approaches differed 1) in how this output increase could be achieved, and 2) how its dividends could be appropriately distributed.

In analysing agricultural stagnation, proponents of the structural approach point to the underlying institutional discrimination against the majority of those employed in the

¹ El-Ghonemy, 1994, p.6.

rural sector. That is, structural impediments prevent broad-based development of rural areas. These structural impediments range from fundamental issues of land-based power structures, and their effect on access to resources, to more tangible issues of government investment policies that are biased against the rural poor. Thus far, the importance of improving “land tenure arrangements, nutritional standards and equity in the distribution of benefits from increased agricultural output has either been underestimated or completely ignored.”² Rural development policies, therefore, should be aimed at redressing inequalities in land distribution, and specifically targeting the poor in the implementation of agricultural investment policies.

These policies are not only proposed for reasons of equity, but also of efficiency. Structural inequalities, it is argued, have hampered the potential for increased agricultural output. The potential gains in output from land reform, for instance, has been put forward by a number of Oxford-based authors, including Griffen, and El-Ghonemy.³ The efficiency argument for structural land reform rests on the evidence suggesting an inverse relationship between the size of a farm and yield per hectare. Tackling rural development from a structural approach, therefore, according to its proponents, would ensure both the necessary increases in production as well as more equitable distribution of the resulting income.

Those favouring a market approach also point to the often counter-productive development policies of the mid-century. Despite sometimes massive investments in

² El-Ghonemy, 1994, p.5.

³ See, for instance: Griffen, *The Political Economy of Agrarian Change*, Macmillan, 1979, and *Land Concentration and Rural Poverty*, Macmillan, 1976:

physical infrastructure, government policies have often discriminated against the agricultural sector both implicitly through economy-wide trade and exchange rate policies, and explicitly through sectoral tax and price policies.⁴ Examples of the first include the promotion of industry behind trade barriers, thereby turning internal terms of trade against agriculture, and the profitability of agricultural products for export and those which compete with imports; examples of the second include excessive taxation of agricultural products by marketing boards or statutory monopolies. Policy recommendations to induce rural development, therefore, largely centre on the reduction of such distortionary government interventions. Rather than interfering in the land and labour markets, governments should focus on providing incentives for the agricultural sector to increase output.

1.3 The Context for Rural Development: The Case of Morocco

Morocco provides an interesting case study in rural development as agriculture has remained of central importance to the country through many phases of political and economic development. The first question I sought to answer was 'why has rural poverty continued to the extent that it has despite reasonable performance in the agricultural sector?' Yet the answer to this is fairly straightforward: deeply ingrained dualism in the development of the agricultural industry has allowed the co-existence of increasing agricultural output and persistently high levels of rural poverty. That is, the vast majority of rural inhabitants rely on subsistence-level agriculture, while a small, heavily subsidized modern sector produces the majority of the country's marketable surplus.

⁴ World Bank, 1987, p.61.

The reason for this dualistic development in the rural sector, however, is less evident and will occupy the majority of the following chapters. What becomes clear is that the duality of Morocco's rural development transcends many political phases in the country's history from the Protectorate through to the present day. The approaches towards rural development in Morocco, whether structural or market-based, are shaped by the specific political culture. The policy-making environment must be understood within this context. As in most countries, the objectives of government policy are largely determined by the government's sources of support. In Morocco, this has historically resulted in a tentative alliance between the rural elite and central authority. While many factors, such as the dictation of policy during the protectorate or the growing numbers of urban poor, have affected the political culture of the country, the relationship between the government and the rural areas has remained largely intact.

1.4 Chapter Outline

The second chapter will outline the major historical antecedents that have shaped the current political environment. This section describes the historical origins of the relationship between the government and the outlying areas, and examines its interaction with the beginning of European influence in the region. Central to the political changes throughout the Protectorate and later after independence is the incremental nature of change. From pre-protectorate times to French rule, and then to independent government,

Morocco has avoided revolutionary upheavals of the socio-economic system. Underlying trends in political behaviour, therefore, can be traced through several historical periods.

The trend towards stability in Moroccan politics is further explored in the third chapter by an analysis of post-independence agricultural policy. By comparing two development plans in the years immediately following independence, the reaffirmation of the long-standing relationship between the rural elite and the government becomes clear. In the fourth chapter, the effects of this policy are then examined in terms of their effect on agricultural output, notably on the citrus and cereals sectors of the agricultural economy.

The period of global economic recession and ensuing structural adjustment provide the context for the next phase in Morocco's economic development, and is dealt with in the fifth chapter. While the rural economy underwent major changes in this period, including a dramatic shift towards outward-oriented agricultural growth, these have not reduced the underlying duality of Morocco's rural sector.

CHAPTER 2 Continuity and Change in Morocco: Historical Antecedents in Moroccan Agriculture

Contemporary Morocco has very much been historically conditioned, the product of several superimposed historical influences. This interaction over time creates a synthesis of old and new in the political culture of the country, and is therefore of relevance to this study. In particular the structures of pre-protectorate Morocco, and those introduced during the relatively brief French rule will provide a relief against which to examine the specific characteristics of rural development in Morocco. What will emerge is a continuity in the underlying motivations of political actors, and therefore in the political culture, which face and adapt to various external influences. In terms of evaluating rural change and development in post-colonial Morocco, the trend is one of evolutionary change, rather than the revolutionary histories of its eastern neighbours.

2.1 Pre-Protectorate Morocco and the *Makhzen*

The Maghreb has historically been a peripheral region, within which Morocco lies at the western extremity. This geographical factor has shaped the development of the country since the very beginning, determining not only Morocco's relation with the outside world, but also the structure of government and society within the country. Classical Arab geographers have described the Maghreb as the island of the West, a description that also fits Morocco within its North African environment.⁵ The region is physically isolated by the Saharan steppes and the Atlas Mountains to the East and South, and by the

⁵ Burke, III, 1976, p.1.

Rif Mountains along the Mediterranean coast. The Atlantic coast to the West was notoriously unforgiving and provided few natural harbours.

The physical environment, however, did not isolate Morocco from outside contact. What it did do was allow the existing systems to respond more slowly to foreign influence, and to incorporate these influences into the existing social structure. Importantly, Morocco avoided Ottoman domination throughout that empire's six hundred years of rule to the East, deeply affecting the political systems that would emerge in the country.⁶ Until the protectorate, no central government was able to dominate the physical environment and pacify the tribal groups of the region. The result was a complex and fluid relationship of authority between the urban centres and rural populations. The rural socio-political structures from the reign of Moulay Isma'il in the seventeenth century to the nineteenth century differed significantly from the more deeply rooted agrarian systems of the Middle East.

The rural population was organized loosely into a myriad of tribal groupings, creating a flexible, if volatile, rural society. These tribal organisations were not autarchic units, but remained an integral component of the Moroccan society. This integration is the result of their interaction with the bureaucratic apparatus of government, as well as through religious affinity, both of which will be dealt with separately.

Each tribal group had a different relationship with the sultan and the bureaucratic apparatus (*makhzen*) over which he presided. The *makhzen* was comprised of the sultan,

⁶ Hourani, 1991, p. 243.

courtesans, as well as secretaries, together constituting a sort of traveling governmental institution. The position of the sultan was accorded, through a claim of descentance from the Prophet, a significant degree of religious legitimacy; but this did not ensure any measure of effective sovereignty over the country. Political control was maintained through constant negotiations and military efforts throughout the country, described by Hourani (1991) as resembling more a wandering medieval monarchy than the bureaucracy of the Ottoman empire: "the ruler, his court and ministers, his few secretaries and treasury, and his personal troops, made a regular procession through the nearer country districts, collecting enough money to pay the army and trying by delicate political manoeuvres to retain at least a final sovereignty over as wide an area as possible."⁷ At periods of strength, such as under the first 'Alawite sultan Moulay Isma'il (1672-1727), enough power was generated to establish a stable system of government based in the urban centres with a significant degree of control over the countryside. The reign of a weak sultan, however, could just as easily produce a situation of no effective control over unruly tribes. The stability of the system, therefore, depended on the sultan's ability to constantly enforce it. This produced a flexible state structure as a product of the highly complex relations between the bureaucratic apparatus and the rural tribes.

This system of authority can be defined as a system of power brokerage between different political actors, by the ruler and his bureaucracy. Waterbury (1970) describes the net result as a high-tension stalemate.⁸ The defense of one's position in this case motivates political behaviour. Political actors, therefore, are characterized by their

⁷ Hourani, 1991, p. 245.

⁸ Waterbury, 1970, p. 5.

flexibility and pragmatism within a system of constantly shifting alliances. From the *makhzen* system, it is the nature of these relationships of authority and the resulting political behaviour that are of the most importance the underlying continuity of Morocco's political culture. That is, it is these characteristics that would remain influential in Moroccan politics until today.

Enveloping this political structure, however, was an underlying unity through the participation in the Muslim community (*'umma*). The role of Islam as a socio-political force served both to legitimize the role of the sultan, as well as to unify otherwise disparate communities. It is also Islam that provided the basis for economic structures, including the distribution of factors of production. Derived partially from geographic necessity, and partially from Islamic tradition, the Moroccan system of land tenure developed in a unique manner. While the physical environment would affect the relative distribution and importance of one sort of land tenure over another, there were roughly five basic divisions of land tenure, all derived for the most part from Islamic law or tradition. These categories were *melk*, *habous* (both public and private), *guich*, and the *arch* or collective lands.⁹

Privately owned *melk* land originally signified those lands acquired by Arab colonizers. Generally, they were concentrated in the Western plains, owing largely to the fact that uncultivated land cannot be privately owned under Islamic law. Because of its predominance in the arable areas of the country, Europeans largely dealt with *melk* land in the process of colonization. A prominent feature of this land type was the prevalence

⁹ Stewart, 1964, p. 17.

of the *khammes* system of tenancy. Absentee landlords would have land cultivated in exchange for one fifth of the crop, usually on plots of around twelve hectares. Frequently poor harvests, however, meant that the labourers were often indebted to the landlords, and thus indefinitely tied to that land.¹⁰ The prominence of the *khammes* system of tenancy within the system of *melk* would be influential in the state of post-independence land distribution.

Habous lands were those left as charitable contributions by the wealthy, as dictated by Koran. Because they were once privately owned, these lands were generally under cultivation. However, the status of these lands as inalienable and unseizable made them difficult for colonization. *Guich* lands were domanial in status, occupied by tribes in exchange for military service.¹¹ The weakness of the government prior to the Protectorate, however, meant that the extent of these lands was limited. Much of the remaining land in the country was collectively owned by tribes in hard to cultivate areas, mostly in the Atlas Mountains and desert plateaus.

The relationship between the *makhzen* and the outlying areas centred mostly around the collection of taxes from tribes. Largely arbitrary, taxation resembled more a system of feudal rights than of system of tax collection.¹² Amounts would be allotted for a certain tribe, which would then be increased several-fold as the burden is passed on to the actual taxpayers. The legal system in pre-colonial Morocco did not promote private

¹⁰ Stewart, 1964, p.17.

¹¹ Taleb, 1998, p.58.

¹² Leveau, 1985, p.66.

appropriation of land, as they largely centred on occupation of land, rather than ownership by title.

2.2 The Protectorate

The forty-four year French protectorate rule would irrevocably change Morocco's political and economic institutions. During their brief sojourn, the French "set up a modern administrative apparatus geared to an expanding economy based on agriculture, mining, industry and trade."¹³ However, despite the creation of this new institutional landscape, the motivating factors of political behaviour following independence bore a remarkable similarity to those of the preceding *makhzen*.

The protectorate was not established as an isolated policy without precedent, but was the culmination of several years of increased European involvement in Morocco, and North Africa in general. Prior to 1860, the Moroccan economy had remained mostly internal and was not geared toward foreign markets. Agriculture in particular was subsistence-based, with neither the output nor legal framework for international commerce. The French invasion of Algeria in 1830 and the Tetouan Wars with Spain (1859-60) were military precedents that brought economic consequences toward the end of the century. On a larger scale, these events were part of a broader shift in European policy, aimed at expanding economic influence throughout North Africa. The European military successes initiated a process of increased European commercial penetration, and the beginnings of the pre-colonial economic system. Throughout the latter half of the

¹³ Waterbury, 1970, p.33.

nineteenth century, European involvement would become more aggressive, culminating in the establishment of protectorate rule.

The protectorate, then, was the logical outcome of an economic system that was for the most part already in place. The colonization process can, for our purposes, be divided into two important components: 1) the military projects ending in the eventual “pacification” of the tribal population (1912-34) and 2) the establishment of a foreign administrative structure, most notably in the agricultural sector. The military invasion had more extensive consequences than the solidification of colonial rule. Through the conquest and control of even the most distant tribes, the balance of traditional patterns of government had been fundamentally altered. That is, the flexible *makhzen*-tribal interactions had been brought into a more rigid framework of a central government.

2.3 The Agricultural Sector Under the Protectorate

The system of land tenure featured heavily in this institutional shift. The approach taken in Morocco, however, was markedly different than in other colonies, notably Algeria. Rather than to declare all land the property of the state, and to simply redistribute it to Europeans, in Morocco the colonization process worked within the bounds of the existing system.¹⁴ The protectorate did intensify the interests of Europeans acquiring land in Morocco. The existing precarious system of Islamic and tribal land tenure, however, did not accommodate the Europeans’ need for security of title. From the French point of view, then, it was necessary to establish a Western system of asset

¹⁴ Bidwell, 1973, p. 219.

ownership. Between 1912 and 1919, in what Stewart (1964) describes as a flurry of *dahirs*, the French established a system of land registration.¹⁵ Obviously, the privately owned *melk* was most easily appropriated, although even here, the lack of clear land titles made the process difficult. All other lands, including *guich* and *habous*, were declared inalienable. While this did not allow for wholesale granting of land to Europeans as elsewhere in North Africa, the institutionalizing of public land ownership laid the groundwork for eventual expropriation – once clearly under the state's control, the land was brought under European control.

The increased generation of legal documents related to land ownership, however, reduced for many the security of tenure rather than improved it. As the existing system had been based on land use rather than ownership, the increasingly legal process brought with it the risk of expropriation. The rush to register land produced two categories within the rural population: those with access to the legal apparatus, and those without. The growing legal insecurity of those without access to the legal system meant that many were forced into a patronage-based arrangement, either with a foreign partner or high-level officials within the *makhzen*. Those who gained from this process were the privileged rural landholders, individualistic and skilled in dealing with legal procedures.¹⁶ This emerging class of the rural Moroccan bourgeoisie stemmed somewhat the tide of colonization, but with the complicity of the French who gained from their support. Overall, then, the colonization process would benefit, obviously, the colonizing farmers, but also the Moroccan rural bourgeoisie.

¹⁵ Stewart, 1964, p.72.

¹⁶ Leveau, 1985, p.76.

Under various pretexts over the coming years, all land types became subject to colonization, although under different methods of compensation. The establishment of clear and secure land titles created the incentives among the settlers for increased agricultural production, as the land could now be exploited without fear of dispossession. The result was a dramatic increase in the area of cultivated land in the years to come.

The major thrust of colonization began after the First World War and reached its peak between 1926 and 1932.¹⁷ Mainly taking place in the Western plains and near the Algerian border, this land appropriation would eventually envelop Morocco's most productive land. Between 1918 and 1923, official colonization accounted for only 71,500ha; by 1953, European holdings would amount to roughly one million hectares. While this represents only 6.5% of farm and rangeland in Morocco, Stewart (1964) offers a significant breakdown of production on those lands. Of the total agricultural output, European production accounted for 15% of cereals, 33% of vegetables and legumes, but 80% of wine and citrus fruits. Representing less than 1% of the rural population at this time, the European population overwhelmingly controlled the modern agricultural sector. This pattern of colonization, and the subsequent decolonisation, would have a major impact in determining Morocco's rural development after independence.

It was during this peak in French colonization that the groundwork of Morocco's modern agricultural industry was established, owing to a privatized system of land tenure, new production techniques and increased trade relations with France. By studying the

¹⁷ Stewart, 1964, p.77.

recent agricultural success of California, mainly in the area of irrigated crops, colonists in Morocco were hopeful that those methods could be reproduced in North Africa. There were many climatic parallels and efforts were intensified to import similar seed varieties and irrigation techniques. Simultaneously, Morocco had reached its quota for exporting vegetables to France and high tariffs dampened the further production of market vegetables.¹⁸ The citrus market in France, however, was under-supplied and provided lucrative opportunities for the settlers.

The reaction of European farmers in Morocco to the new markets was remarkably swift. From focusing mostly on wheat production in the early protectorate years, citrus exports after 1941 nearly always exceeded wheat exports in tonnage and value. The dramatic expansion of citrus production is indicated in table 2.1.

Table 2.1 Citrus Production and Exports 1912-1956

Years	Total hectares	<i>Annual exports</i> (1000 t)
1912-28	1.470	--
1929-33	3.890	--
1934-38	10.850	5.5
1939-43	17.510	11.3
1944-48	23.785	27.8
1949-53	37.775	104.8
1954-56	46.280	127.5

Source: Swearingen, 1987; FAO, 1948-1959

In contrast to the roughly 6,000 European holdings described above, Moroccans controlled roughly 14,000,000ha of range and farmland, close to half of which was

¹⁸ Swearingen, 1987, p.74.

arable. This land, however, was divided among 800,000 to 900,000 individual holdings.¹⁹ Without accounting for distribution, this places the average size of a Moroccan landholding at 17ha, eight of which were arable.

These figures, however, fail to illustrate the increasingly unequal land distribution within the Moroccan population. The geographic disruption of traditional agriculture described above was paralleled with significant institutional change. The new legal and institutional framework established by the French meant that Morocco's rural households moved from predominantly pastoral land use to settled agriculture, bringing with it increasing conflict over land control. While control over land was historically resolved through force, manipulation of new laws and privileged access to the colonial bureaucracy were now the main factors in land acquisition. The Moroccan elite, who composed a subsidiary level of the colonial administration, would largely form the agrarian bourgeoisie following independence.

To capture these developing inequalities and strengthening of the landed Moroccan elite, it is more useful to make comparisons between the traditional and modern lands, rather than between Moroccan and European holdings. The modern sector in the last few years of the protectorate consisted of around 1.3 million hectares of Morocco's best land, and controlled by 5,900 Europeans and 1,700 Moroccans. This is in contrast to 6.5 million hectares in the traditional sector, in the hands of 1.3 million households. Average sizes of holdings were 170ha and less than 5ha, in the modern and

¹⁹ This is in contrast to European holdings which were 170ha in average size, 112 of which were arable. Stewart, 1981, p. 81.

traditional sectors respectively. In fact, controlling for the appearance of share-cropped, traditionally-farmed latifundia among some of the Moroccan elite, Swearingen (1987) estimates the average peasant holding to have been less than four hectares, with 500,000 households virtually landless.²⁰

2.4 Independence and the Politics of Stability

Independence through most of North Africa brought revolutionary changes in government, with a major upheaval of existing institutions. Morocco, however, is the exception to this trend. Returning to the earlier point of continuity in Morocco's political behaviour allows a better understanding of the politics immediately following independence. In understanding the continuity of Moroccan political culture it is important to note that while the French maintained effective control, there was no attempt to efface completely the existing form of government. The sultanate was not in control, but instead was carefully preserved until after the protectorate. The largely ceremonial institution of the sultanate during the protectorate would nevertheless govern independent Morocco after 1956.

The beginnings of the nationalist movement as a political factor can be seen as a foreign creation as a result of French involvement in the country. The link between nationalism and Islamic revival, however, integrated the national idea into Moroccan politics. Islam had played a unifying role in Moroccan culture before the protectorate.

²⁰ Swearingen, 1987, p.144. "Virtually landless refers to holdings of less than 0.5ha or being totally landless."

and its joining with nationalist objectives illustrates the incorporation of new concepts into the dominant political culture. While the primary Islamic revivalist movement, Salafism, was not originally linked to the nationalist movement, from around 1930 on “the twin objectives of the purification of the Muslim community and the expulsion of the foreign intruder became clearly linked.”²¹

The nationalist movement was not ideologically connected to the sultan in its quest for independence. The link between the two came out of a pragmatic agreement between the politically weak sultan, Mohammed Ben Yussuf, and the nationalists, now under the umbrella of the Istiqlal Party. To counter this new alliance between the nationalist movement and the sultan, the protectorate regime drew on the dissatisfaction felt by the primarily Berber tribes in the rural areas. Politically, the years between 1945 and 1955, then, were primarily characterized by different factions attempting to solidify their position in the face of the colonial power. The alliance-making produced small *ad hoc* guerrilla movements, but in accordance with Moroccan historical patterns, the tension-filled political scene did not erupt into civil war. After a brief exile, the sultan returned to the proclamation of formal independence on March 3, 1956.

Waterbury (1970) points out that the situation facing Mohammed V in 1956 bears a remarkable similarity to many another interregnum in Moroccan history: a weakened ruler faced with the task of making alliances with a myriad of political actors vying for political power.²² While political actors had been reshaped in many cases and were

²¹ Waterbury, 1970, p.45.

²² Waterbury, 1970, p.49.

seeking control over a novel system of administration, the nature of political behaviour remained to a large extent resilient throughout the changes. It is within this historical context that the continuity of Moroccan political culture of the post-protectorate period can be understood.

Between 1956 and 1962, then, Morocco was politically unstable. The independence movement became fragmented, and the rural population was rebelling in the Rif and the Middle Atlas. As in pre-protectorate times of uncertainty, the result is a politics of alliances to ensure the throne's stability. The net effect in policy terms was a *politique d'attente*, preventing any meaningful political change following independence. To secure his position, the new Moroccan landed elite featured heavily in Mohammed V's political alliances. Consequently, rural reform was effectively kept off of the political agenda. Between 1956 and 1960, the government redistributed around 16,000ha to three hundred Moroccan beneficiaries – roughly one per cent of the annual rural exodus.²³

Much of the character of post-protectorate Moroccan politics has its roots in the way in which the monarchy positioned itself within the new institutional framework following independence. After Mohammed Ben Yussuf returned from exile to become King Mohammed V, he enjoyed widespread public support. Despite his authority as well as the venerated Commander of the Faithful (*Amir al-Mu'minin*), the king acted primarily in a defensive manner to assure the continuity of the monarchy. Earlier I presented the Moroccan elite behaviour historically as consisting of a multitude of actors in conflictual equilibrium. Seen in this way, the king's actions following independence follow the same

²³ Swearingen, 1987, p.146.

strategy as the sultans prior to the protectorate under the *makhzen* system. Thus, Mohammed V was able to skillfully position himself as arbiter and power broker, above other political actors.

The initial manoeuvring of the monarchy, as a result of the events immediately following independence, was a determining factor in Moroccan politics from then on. Generally speaking, it has meant that the monarchy has used its authority for self-preservation as opposed to bringing about significant change to the structure of government. The net result has been a stable system of government, which is nonetheless reluctant to engage in significant reform. In contrast to the other countries of the Maghreb, this can be seen in the lack of radical social experiments. The consequences for the rural sector, and agricultural industry in particular, are dealt with at greater length in the following chapter.

2.5 Land Distribution in Independent Morocco

The conservatism of the post-protectorate regime is clearly evident in its policies of land reclamation and redistribution. For instance, the last of the European lands would not be expropriated until 1973, seventeen years after independence.²⁴ All in all, only minor land reform took place between 1956 and 1960. By passing legislation on foreign leases of collective lands, roughly 23,000ha were recuperated from Europeans.

²⁴ Swearingen, 1987, p.146.

Table 2.2 Land Reform and Distribution in North Africa

<i>Country</i>	<i>Area redistributed as % of total arable land</i>	<i>Land recipients as % of total agricultural households</i>	<i>Gini Coefficient of Land Distribution</i>
Algeria	68	N/A	N/A
Egypt	10	13	0.432
Libya	15	13	0.566
Morocco	4	3	0.690
Sudan	0	0	N/A
Tunisia	57	49	0.603

Source: El-Ghonemy, 1993; FAO, 1988

Disparities in land ownership persisted after independence. During the 1950s and 1960s, many countries in the Near and Middle East undertook major changes in land policy, either in comprehensive land reform (as in Egypt, Iraq, Syria), or through the nationalization of foreign farms (as in Algeria, Libya, Tunisia and Morocco).²⁵ During this era of fundamental change in the rural areas, however, the Moroccan government did not go nearly as far in these reforms as other countries in the region (Table 2.2). The change was essentially a transfer of assets from the departing Europeans to the Moroccan elite. Primarily through land sale and state re-appropriation, the Moroccan landed elite would significantly increase their holdings. Independence, in fact, did not bring any real change in the relative land distribution: 40 per cent of the rural population were landless labourers or sub-marginal peasants, while roughly nine per cent constituted the large landholders.²⁶ To this day, land distribution in Morocco is one of the least equitable in North Africa and the Middle East generally (see Table 2.2).

²⁵ El-Ghonemy, 1967, p.39.

²⁶ Seddon, 1981, p.190.

Divisions between the modern and traditional sectors further intensified the level of inequality: the 8,500 large Moroccan landholders, who possessed 30 per cent of the total agricultural land, controlled 65 per cent of the irrigated lands.²⁷ This division of landholdings from mid-century onward had a major impact on the income distribution from later agricultural growth. Moreover, the historical pattern of conservatism within the government described in the pages above has been the most persistent hurdle in addressing the underdevelopment of rural areas. The next chapter will draw upon this historical setting to examine the effect on post-protectorate agricultural policies.

²⁷ FAO, 1991, p.179.

CHAPTER 3 Post-Independence Agricultural Policies and their Impact on the Rural Sector

The flux and uncertainty brought on by independence from European powers presented a number of different ways forward, and nationalist governments enthusiastically set new courses for their countries' development. Important in these considerations was the relative importance of different economic sectors in the development of the post-independence economy: typically considerations between the traditional and modern sectors would shape the discourse of economic planning.

In accordance with economic development theory of the time, collectively referred to as the structural change theories, economic development was often seen as a shift from the subsistence-based traditional sector to the modern industrial. In many cases, this led to a neglect of the agricultural sector, its purpose limited to that of supplying surplus labour to the modern sector. On the surface, Morocco does not appear to have followed this path: "Il faut dire que lorsque la plupart des pays du Tiers-Monde au début des années 60 optent pour une industrialisation assimilée alors au "développement", le Maroc se distingue pour la priorité qu'il accorde à l'agriculture."²⁸ Agricultural production has always been essential to the Moroccan economy, although it has been progressively losing its importance as a proportion of GDP (see Figure 3.1).

²⁸ Akesbi, 1995, p. 113.

Figure 3.1 Percentage Share of Agriculture in GDP

Source: FAO Database

This is not to say, however, that Moroccan agriculture, and the rural areas more generally, did not change dramatically after 1956. On the contrary, the agricultural sector was the source of some of the most complex problems that Morocco had to face. While agricultural production would continue to play a vital role in the economy, the changes in agricultural policy of the Moroccan government immediately following independence marked a clear choice in how the rural sector would develop to this day. This chapter will illustrate the development of Morocco's agricultural policies in the years following independence, through an examination of the government's development plans between 1960 and 1970. I will argue that the change in this period indicates the government's clear decision to avoid significant reform of the agricultural sector in the face of political instability.

The most striking effect of colonization on Moroccan agriculture was the juxtaposition of the modern farming sector with the still antiquarian methods of the much larger traditional agricultural sector. The duality in the production structure, and consequently in production techniques and wage differentials, all contributed to the polarization of the rural population. As will be seen, the government was keenly aware of the tenuous state of the rural sector, and in the early stages of independence moved to address the issue, albeit cautiously. As part of a larger nationalist movement, it was deemed necessary to repatriate lands from the French in order for Moroccans to prosper from their own land. Between 1960 and 1965, however, this cautious reformism quickly reverted to the traditional conservatism that has historically characterized Moroccan leadership. The contrast can be seen in the two development plans, the first for the period 1960-64 and the second from 1965-67. It will be seen that by 1970 Morocco had clearly chosen to vigorously pursue its modern agricultural sector at the expense of the traditional sector. This choice would significantly affect how rural areas fared in the transition to an export-driven economy.

3.1 The Plight of the Rural Sector & Efforts to Revive it

During the protectorate and thereafter there had been attempts to address the chronic underdevelopment of the rural areas. Three separate government programmes, the first two under the protectorate government, defined the official efforts to raise productivity in dry-land farming: the period of *Sociétés indigènes de prévoyance*, from around 1917 to

1945; the period of the *paysanat* scheme, from 1945 until 1957; and from 1957 onward the *Centres de travaux*.²⁹

Similar to another programme in neighbouring Algeria, the *Sociétés indigènes de prévoyance* was the first concerted effort on the part of the government to address the problems of the traditional sector. Primarily, the purpose of the programme was to provide seasonal credit for harvest expenses and medium-term loans for small-scale capital expenditures. While the programme may have had an isolated impact in certain locations, it fell far short of transforming the traditional sector. Van Wersch ascribes this ineffectiveness largely to a shortage of resources to affect large portions of the rural population, inconsistent implementation of the programme at the local level, and a lack of competent technical advisors.

While the provision of credit continued under the *Sociétés indigènes de prévoyance*, the government sought a completely new formula to stimulate the rural economy. The result was the *Paysanat* scheme in 1945. The principle behind the programme was that it was to be wide-ranging in scope, but limited in geographic scale. The actions of the government were to be limited to certain zones, the *Secteurs de modernisation de paysanat* (SMP). Mostly located in favourable locations for agricultural production, these areas were equipped with basic social infrastructure, including schools and clinics, as well as extensive capital equipment. Between 1945 and 1956, 62 SMPs were established, directly managing around 22,000 hectares, thus limiting the overall impact of the scheme.

²⁹ Van Wersch, 1968, p.34.

Upon independence in 1956, the Moroccan government examined possible strategies for continuing to bring the rural areas in line with the developmental pace of the rest of the country. The resulting plan would be the single committed act of the Moroccan government to raise dry-land agriculture, *Opération Labour*, in 1957. Broadly, the goals of the programme were as follows:

1. To increase cereal production through widespread introduction of the tractor
2. To introduce more advanced agricultural methods, including the use of fertilizers and improved seed varieties
3. To increase the cooperative as the new nucleus of rural organisation.³⁰

The plan was implemented by grouping many plots of land into large blocks, to be ploughed as if it were a single holding. Once ploughed, the remainder of the work would be done by the individual farmer on his plot of land. While the farmers continued to work their own land, they were subject to compulsory crop rotations, mandatory use of fertilizers, all dictated by the local government representative. Therein lay the flaw that eventually brought the plan to an end.

Despite being introduced with revolutionary rhetoric, the programme did not last long after its second year. In the end, the primary reason was that the programme was highly unpopular with Morocco's peasants. The disregard for traditional field boundaries,

³⁰ Swearingen, 1987, p.150.

the coercive methods employed, combined with attempts in 1958 to introduce cost recovery brought the programme to a swift end.

The failure of *Opération Labour* was a significant factor behind the government's eventual decision to recommit itself to the development of irrigated agriculture. This reorientation is evident in the development plans produced by the government covering the brief reformist period after independence through to 1970.

3.2 *Plan quinquenal 1960-64*

The 1960-64 plan sets agriculture as the cornerstone of short-term economic growth, arguing that increased industrial production can only be a long-term objective. In this context, rapid growth of production and per capita income will result only from a clear focus on the agricultural sector. This agricultural growth, however, is inwardly oriented. That is, the role of the agricultural sector is framed not in terms of exportable products, but rather of directly satisfying domestic nutritional needs. The emphasis, therefore, is on agricultural self-sufficiency: "Dans l'intérêt même du développement du pays, c'est donc à son propre sol que l'on doit demander en priorité les produits de l'alimentation."³¹

Agricultural production designed to satisfy domestic needs, both in rural and urban areas, will depend primarily on the traditional sector, as cereals are the mainstay of the Moroccan diet. During the last years of the protectorate, the settler farms in the modern sector accounted for only 7% of the total area devoted to cereal production, and

³¹ Morocco, 1960, p.67.

9% of production.³² The protectorate, however, had created a serious crisis in the traditional sector. Yields in these areas were declining, and the increases in production were overtaken by dramatic increases in population growth rates.³³ Colonization had dislodged Moroccans from much of the best land, and a rapidly growing population was forced onto increasingly marginal lands.

In its 1960-64 plan, the government recognized the stagnation in the traditional sector, and identified it as a critical barrier to the expansion of agricultural production. As evidence, the government cites the often declining per capita cereal production in the second half of the protectorate. The earlier development plan also describes the distribution of land as the underlying cause of agricultural stagnation:

La répartition de la terre, les modes d'exploitation et les conditions de la commercialisation sont causes de la stagnation actuelle et s'opposent à la mise en oeuvre d'une politique d'expansion agricole... La repartition actuelle de la propriété accroît le déséquilibre entre la production du sol et la population à nourrir.³⁴

In assessing the agricultural situation after independence was achieved, government surveys reported significant inequality in land distribution. Roughly, the government estimated that between 5 and 10 percent of agricultural households controlled more than 60 percent of the land, while 40 percent of rural households

³² Stewart, 1964, p.87.

³³ FAO estimates place the overall population growth rate in 1961 at close to 3% (FAO Statistical Database).

³⁴ Morocco, 1960, p.75.

possessed either no land or holdings of less than 0.5 hectares. Further, it was estimated that 90 percent of households had landholdings smaller than 2 ha.³⁵

To redress these inequalities, the 1960-64 plan laid out an arrangement for land reform, the result of which would be a rationalisation of farming operations to reflect optimal farm sizes in dry and irrigated zones.³⁶ The reform measures were, on paper, quite far-reaching, including:

1. Reclamation of all private colonized lands;
2. Reclamation without compensation of large landholdings benefiting excessively from public irrigation works;
3. Reclamation with compensation of lands that were not sufficiently exploited; and
4. Decrees on the maximum size of landholdings.

Irrigated as well as dry lands were to play a role within the plan to revitalize Moroccan agriculture. The continued importance of irrigation, which accounted for 20% of export earnings in 1955,³⁷ was acknowledged in the 1960-64 plan by the creation of a nationally coordinated office for irrigation development, l'Office National des Irrigations (ONI). Operative at the national level, the ONI was to oversee the development, including land reform initiatives, in ten major irrigation perimeters.³⁸ While the 1960-64

³⁵ Morocco, 1960, p.75.

³⁶ For mechanization, the government calculated that plots would need to be of 50ha and 400ha for irrigated and dry land respectively. Morocco, 1960, p.81.

³⁷ Morocco, 1958, p.98.

³⁸ These were Basse Moulouya, Rharrb, Oued Beth, Doukkala, Beni Amir, Beni Moussa, Haouz-Nfis, Ziz Tafilalt, Draa, Souss. Morocco, 1960, p.128.

plan did accord much importance to the irrigated sector (see Table 3.1), agricultural development would need to come from the entire rural sector, both irrigated and dry, and proposed significant reforms to both.

Table 3.1 The Importance of Irrigation in the Plan Quinquennal 1960-64³⁹

	<i>Public Financing</i>	<i>Credit</i>	<i>Auto-financing</i>	<i>TOTAL</i>
Agriculture	42.550	67.182	50.476	160.208
Hydraulics	36.271	4.549	N/A	40.820
TOTAL	78.821	71.731	50.476	201.028

Source: Morocco, 1960

Political factors, however, would eventually prevent this agrarian reform from being implemented to any significant degree. In the post-independence political climate, Mohammed V was preoccupied with maintaining his own authority and control over government. As in pre-protectorate Morocco, this involved negotiating with the various political forces, and hopefully playing one off against the other. In the end, serious attempts to modernize the traditional farming sector were sacrificed for the sake of political stability.⁴⁰ In this scenario, the land reform initiative would provide a useful political tool to maintain allegiances.

In 1956, the French controlled roughly 900.000 ha in Morocco. In the years just before and after independence, significant tracts of land were sold to Moroccans, some of

³⁹ In millions of francs.

⁴⁰ Pérennès, 1992, p.34.

it legally, some of it illegally. From records of the French embassy in Rabat, Griffin (1976) estimates that Moroccans purchased between 386,000ha and 500,000ha from the departing French, much of it before 1960.⁴¹ This created a new class of Moroccan large landowners, many of which belonged to the increasingly powerful and conservative Istiqlal Party. Naturally, this rural elite sought to avoid any major land reforms. In effect, the need to keep these elements of the political landscape pacified forced any meaningful land reform off the agenda. But the risk of rural unrest meant that talk of land reform kept a presence in the government's discourse on agricultural development. Both Mohammed V and his son Hassan II were skilful at using the issue of land reform as a threat to keep the support of the elite, and as a promise to the Moroccan *fellaheen*.

Independence in fact had very little impact on the system of land tenure in Morocco. Essentially, the rigid framework of French property law was passed integrally to independent Morocco. The status of colonized land came into question, but even this was done with relative caution. Public colonized lands were reclaimed in 1964, but another decade would pass before privately colonized lands were recovered.⁴² The changes after 1956 were limited to the introduction of two new land titles: those under land reform initiatives, and those controlled by state monopolies. In total, however, these represented less than two per cent of arable land in the country.⁴³

The timing of Morocco's few land reform initiatives offers further evidence of their directly political objectives, even if the full extent of the redistribution never took

⁴¹ Griffin, 1976, p.101-2.

⁴² Leveau, 1985, p.79.

⁴³ This is in contrast to private *melk* lands that constitute 80% of arable land. Taleb, 1998, p.59.

place. In March of 1965, serious riots broke out in Casablanca: one month later the king announced the creation of the Common Fund for Agrarian Reform, which was to redistribute state lands. Nevertheless, only minor distributions took place. The single largest distribution of land in a two-year period occurred in 1971-2,⁴⁴ a period in which King Hassan survived no less than two nearly successful coup attempts.

Overall, however, the increased political uncertainty following the death Mohammed V pushed Hassan II further in the direction of conservative alliances to preserve his power base. Between comprehensively addressing issues of rural inequalities, and evading them in favour of political support, Hassan clearly chose the latter.

The failure to address the underlying problems in the land tenure system after independence seriously hampered the relative importance placed on the traditional sector in the government's investment strategy in the first years of independence. The continuation of highly centralized policy-making, the failure to find equitable ways to allocate collectively held land, and the reluctance to effectively recover colonized lands all contributed to the entrenchment of the colonial rural landscape, well beyond the end of the protectorate. Under these conditions, agricultural development falls to those with access to the state apparatus, and the capital to develop it profitably – precisely those who assure the monarchy a base of support.

⁴⁴ 122,212ha were distributed in this 24-month period, nearly all of it in irrigated zones. Swearingen, 1987, p.176.

In the period from 1960 to 1970, the political factors in agricultural policies would be bolstered by parallel economic considerations. In 1963, the Moroccan government invited a World Bank mission to offer solutions for reviving an increasingly weak economy. The recommendations of the World Bank study mission, published in *The Economic Development of Morocco* (1966), would offer further legitimacy and momentum to a course of action the Moroccan government was already following.

3.3 *Plan Triennial 1965-67 and the Doctrine of Dam Building*

The 1966 World Bank study would have an important impact on Moroccan agricultural policy, as will be seen in the new 1965-67 triennial development plan. Also recognizing the importance of agriculture to the Moroccan economy, the mission recommended an emphasis on raising agricultural production as quickly and efficiently as possible. However, in contrast to the 1960-64 policy, the World Bank advised a focus on those sectors that provided the highest immediate return, "to select those activities which maximize value added to the national economy taking into account the opportunity costs of the various inputs, such as imported capital and intermediate goods, *as against the employment of labour-intensive methods.*"⁴⁵ Largely, this meant further concentration in irrigated agricultural products, notably citrus fruit and vegetables (See Table 3.2).⁴⁶ Further, because of the limited resources of the Moroccan government, the available resources should be geographically concentrated in the regions where they will produce

⁴⁵ World Bank, 1966.

⁴⁶ Comparing the recommended targets from the World Bank with actual production figures from the year of publication (see Annex III and V, production figures for 1965), the World Bank recommended holding cereal production virtually constant over the five-year period, while nearly doubling the citrus production in the same period.

the highest return; meanwhile, other segments, "because of poor resource endowment and slow-changing traditional attitudes... inevitably can advance only more slowly."⁴⁷

Table 3.2 World Bank Recommended Targets for Leading Crops in 1970

<i>Commodity</i>	<i>Output (1000 metric tonnes)</i>	<i>Net Imports (-) or Net Exports (+)</i>
Four main grains	3290	-338
Vegetables	1330	+234
Pulses	207	+103
Citrus fruit	950	+600
Cotton	17	-30
Sugar beet	1000	-2400
Seed oils	22	-43

Source: World Bank, 1966

Table 3.3 Dams Constructed in Morocco between 1956 & 1980

<i>Dams</i>	<i>River</i>	<i>Year</i>	<i>Displacement (hm³)</i>	<i>Cumulative Displacement (hm³)</i>
Nakhla	Nakhla	1961	7.1	1971.3
Safi	Sahim	1965	2.0	1973.3
Mohammed V	Moulouya	1967	595.8	2569.1
Ajras	Ajras	1969	2.8	2571.9
Aït Aadel	Tessaout	1970	191.0	2762.9
Hassan Addakhil	Ziz	1971	362.0	3124.9

⁴⁷ World Bank, 1966, p. 102. (Emphasis added).

Mansour Eddahbi	Draa	1972	567.0	3691.9
Y. ben Tachfine	Massa	1973	310.0	4001.9
Idriss 1 st	Inaouene	1973	1207.0	5208.0
S.M. Ben Abdellah	Bou Regreg	1974	493.0	5701.9
O.El Makhazine	Loukkos	1978	789.0	6490.9
Timi N'Outine	Tessaout	1978	4.0	6494.0
Ibn Batouta	Mharhar	1978	41.5	6536.4
Garde du Loukkos	Loukkos	1978	4.0	6540.4
Nekor	Nekor	1978	43.0	6583.4
Nador	Nador	1978	2.2	6585.6
El Massira	Oum er-Rbia	1979	2724.0	9309.6
Tamzaouert	Issem	1979	216.0	9525.6
Sidi Driss	Lakhdar	1980	7.0	9532.
Total 1956 – 1980				7568.4

Source: Pérennès, 1992, p.31

The World Bank study had an immediate impact on Morocco's agricultural policies. Important among these was to further separate the modern and traditional sectors. While irrigation was important component throughout the protectorate and during the first years of independence (see Table 3.1), irrigated lands were now to be the engine behind most of Morocco's agricultural growth (See Table 3.2). As Morocco's agricultural production slowed to around 1.5 percent – half the population growth rate – the need to increase production became imperative. The *Plan triennal 1965-67* laid out the beginning of a policy increasingly focused on harnessing Morocco's rivers through construction of large dams. While the 1960-64 plan assigned around 20 percent of public agricultural investment into irrigated zones, the 1965-67 triennial plan increased this to over 50 per cent (Table 3.3).

Table 3.4 Planned Public Investments in Agriculture 1965-67

	1965	1966	1967	TOTAL
Hydraulics	188,469	195,239	181,062	564,770
Rain-fed Agriculture	55,780	94,160	82,910	232,850
Field Studies	5,200	5,140	5,800	16,140
Integrated Projects	13,295	24,055	32,620	69,970
Soil Protection	21,200	23,190	25,510	69,990
Mnstl. Interventions	6,532	8,533	8,675	23,740
Agro-Research	5,795	5,230	4,960	15,990
National Promotion	18,000	19,500	23,500	61,000
TOTAL	314,271	375,052	365,037	1,054,360

Source: Morocco, 1965

The renewed emphasis on the irrigated sector in the 1965-67 plan was a sign that the government was significantly shifting its focus to the modern agricultural sector. This new policy came to be called the *politique des barrages*, officially launched in 1968. By 1969, Hassan II officially announced 1,000,000 ha under perennial irrigation to be a national objective. The announcement was followed by the launching of a new agricultural development code – the Code des Investissements Agricoles. In essence, this code gave force of law to the government's strategy of rural development through massive investment in the irrigated sector. Between 1969 and 1974 alone seven dams were completed, representing an additional 358,000 ha of irrigable area. In fact, the new policy thrust had a significant impact on agricultural production throughout the 1970s and

beyond. Next to Egypt, which is 97% irrigated, Morocco now has the highest level of irrigation development in the Maghreb.⁴⁸

The government's commitment to irrigated agriculture, as represented by the Code des Investissements Agricoles, defined the future of Morocco's agricultural development. But this policy was also a commitment to the continuation of the French colonial policy of the protectorate. The predominant feature of the Moroccan government's policy position throughout the 1960s and 1970s, then, was its consistency with the past. The investments made in the modern sector described above show the determination with which the Moroccan government has pursued the colonial vision of a fully irrigated Morocco. As during the protectorate, this emphasis on modern agriculture left the traditional sector largely untouched in terms of access to resources.

⁴⁸ El-Ghonemy, 1993, p. 450.

CHAPTER 4 Citrus Fruit and Cereals: A Comparative Outlook on the Modern Versus Traditional in Moroccan Agriculture

Throughout the changes to the government's investment strategy, the ostensible objectives of the policy have remained constant: to secure the nutritional needs of the population; to develop agricultural exports to improve the balance of trade; and to stem the rural exodus by improving rural welfare.⁴⁹ From the following analysis, however, it becomes clear that the government's new policy failed to achieve the first and the third, and that the progress made on the second is tenuous. To examine this failure, it is useful to contrast two major commodities groups in the Moroccan agricultural sector: Cereals, the mainstay of the Moroccan diet and major crop of the traditional sector,⁵⁰ and citrus products, an increasingly important export crop and entirely produced in the modern irrigated sector. While other products are grown in both sectors, these two commodities serve to illustrate the focus of government investment, through its *politique des barrages*, in the years following independence. The disparities between these two industries over time underline the divergence within the rural population itself, and offer significant insight into the response of the rural sector to the changing political and economic climate in the country.

⁴⁹ Swearingen, 1987, p.169.

⁵⁰ In fact, it is producers with less than 5 ha that are the primary producers of cereals in Morocco. El-Ghonemy, 1993, p.454.

Figure 4.1 Cereal and Citrus Production in the 1970s

Source: FAO Database

The immediate impact of the renewed *politique des barrages* became clear throughout the 1970s: significant increases in irrigated citrus production, and a marked decline in dry-land cereal production (Figure 3.2).

Food security is a preoccupation of governments in Maghreb, and policy has supposedly been geared to increasing food production faster than domestic demand. Of the five countries of the region, three, including Morocco, qualify for food aid according to the United Nations. While the French vision of recreating the granary of Rome in Morocco proved to be a failure (see Swearingen, 1987), Morocco was, until the 1960s, a net exporter of wheat. Through the 1960s this began to falter, and by the time King Hassan's *politique des barrages* was fully underway in the 1970s, Morocco's net wheat exports would remain negative, and continue their downward

spiral until today (Figure 4.3). Of total food imports, cereals have increased in importance from 22% in 1970 to 55% in 1985. Despite the stated goal of improving food self-sufficiency, Morocco has failed to feed itself from domestic production.

Figure 4.3 Net Cereal Exports 1961-1999

Source: FAO Database

If the shift toward public investment in the irrigated sector failed to fulfil the objective of self-sufficiency, it could be hoped that this would mean success in developing agricultural exports. After all, the modern sector does produce the great majority of tradable crops. Taking again the case of the citrus industry, it can be seen that exports in citrus products did increase significantly in the second half of the century. Exports of tangerines, mandarins, clementines, and satsma increased by a factor of eight between 1961 and 1999, from 32,000 metric tonnes to over 250,000.⁵¹ Furthermore, in the 1970s, international prices for citrus products

⁵¹ Calculated from the FAO On-line Statistical Database

doubled,⁵² meaning that the increased citrus exports brought in significant foreign currency, and hopefully bolstered the current account balance. However, in a period where agricultural exports increased twofold, imports increased eightfold, creating a significant burden on the national economy.

The share of agricultural products in total exports has continued to decline. In 1967-73, agriculture represented 56% of total exports, and by 1983-85 it had declined to 27%. Partly, this has been due to a sharp increase in phosphate exports in the mid-1970s, which briefly tripled in price. Independently of the mineral sector, however, there is cause for concern in the direction of Moroccan agricultural trade. In examining the importance of agricultural exports, it is important to know with whom Morocco is trading. Historically, Morocco's most important trading partner has been the EU, and France in particular. However, France's share of Morocco's export market has declined steadily between 1967 and 1985. Overall, Morocco's exports to the industrialized world have dropped from 73% in 1967, to 57% in 1985. The entry of Spain and Portugal into the EC in 1986, and their subsequent integration into the Common Agricultural Policy, has continued to constrict the export market for Morocco's agricultural products. Unless agricultural products can be diverted to third markets, they will have to be increasingly absorbed into the domestic market, likely forcing the government to subsidize their domestic consumption.

⁵² FAO, 1986.

Table 4.1 Morocco's Agricultural Trade Balance, 1961-1998

<i>Year</i>	<i>Agricultural Trade Balance by Index</i>	<i>Year</i>	<i>Agricultural Trade Balance by Index</i>
1961	10	1980	6
1962	13	1981	-53
1963	22	1982	-28
1964	21	1983	-24
1965	20	1984	-57
1966	18	1985	-32
1967	19	1986	-7
1968	24	1987	-2
1969	34	1988	7
1970	26	1989	-19
1971	20	1990	8
1972	38	1991	11
1973	41	1992	-44
1974	-1	1993	-64
1975	-35	1994	-44
1976	3	1995	-83
1977	-7	1996	-42
1978	4	1997	-15
1979	0	1998	-33

Source: FAO Database

Figure 4.4 Agricultural Trade Balance (1961-1999)

Source: FAO; Swearingen, 1996; Bourguignon, Melo & Morrisson, 1991

The improvement of the agricultural terms of trade would suggest a strong long-term agricultural trade balance. Unfortunately, this has not produced itself, and the agricultural balance of trade has hovered around zero since 1973 (see Table 4.1 and Figure 4.4). If public investment is geared toward export promotion in the modern sector, then this points to a crisis in the agricultural sector. While the protectionism of the EEC is partly responsible, Morocco's near exclusive focus on the irrigated sector has largely created this situation. By shifting its import substitution policies from the irrigated sector to cereals, i.e. changing the internal terms of trade, the government could have effected this structural change. However, the political forces against such policies, in this case large landowners and the urban poor, held sway over a government seeking to solidify its authority. Overall, while exports of certain irrigated crops increased dramatically in the 1970s and 1980s, the government has failed to produce a truly export-driven agricultural sector.

The third underlying objective of Morocco's agricultural policies has been the improvement of rural welfare, with an aim to slow the influx of people into the *bidonvilles* of Casablanca and Rabat. While the level of rural welfare is more difficult to estimate, and will be the focus of another chapter, the divergent trends in urban and rural populations can be easily observed. Since independence, Morocco's total population has been increasing in a linear fashion, roughly at 3% per year.⁵³ Within the rural population, however, the numbers are strikingly different. Further, the declining portion of the population working in agriculture points to the failure of the government's policy of stimulating the agricultural sector.

Figure 4.5 Urban and Rural Populations 1961-1999

Source: FAO Database

⁵³ Estimated from FAO population data. FAO On-line Database.

The rate of rural exodus is a clear sign of distress in the agricultural sector, usually indicating that a household's land had fallen beneath the threshold to be viable or that they had become completely landless.⁵⁴ The rural exodus, however, was not new in Morocco, having begun around 1920. Swearingen (1987) estimates that in the latter years of the protectorate, some 30,000 to 50,000 peasants left the countryside annually. By the mid-1980s, this had increased to around 100,000 annually, reflected in a 1.8% growth rate in rural areas and 4.8% in urban areas.⁵⁵ But *within* the rural population, the demographics are just as concerning. While the rural population continues to increase, albeit at a decreasing rate, the agricultural population has, since the mid-1980s, been decreasing. This means that within the rural areas an increasing number of people can no longer sustain themselves on agriculture, and points to the failure of the government's stated policy in this area. As unemployment in urban areas continues to rise, it is also evident that urban industries are not able to absorb the labour influx. Since the implementation of the *politique des barrages*, then, the problem of rural exodus has in fact worsened.

The economic crisis of the late 1970s, and the subsequent need for structural reform, would compose the next chapter of Morocco's agricultural development. The debt crisis throughout the developing world initiated a push toward far-reaching structural adjustment programmes, largely under pressure from international creditors. Driven by the World Bank and International Monetary Fund, these programmes sought considerable reduction in government expenditure, as

⁵⁴ Swearingen, 1987, p.149.

⁵⁵ Calculated from FAO population statistics, FAO On-line Database.

well as an effort to orient the economy towards the international markets. Morocco, like many countries in the developing world, has its comparative advantage in low-cost labour. In the drive to restructure the economy in line with comparative trade advantages, and thus to promote export-oriented growth, the agricultural sector would naturally have an important function in any adjustment programme. This was the case in Morocco. The next chapter will go further into the details of Morocco's adjustment measures. What follows is a continuation of the analysis of the contrasting development of the cereal and citrus industries.

The adjustment measures had two underlying effects on the agricultural sector. First, the reduction in government input and output subsidies has an effect on agricultural prices that farmers and consumers face; second, the overall switching of expenditures to export-oriented industries, both in and outside of the agricultural sector. From this it can be hypothesized that the adjustment measures would benefit the agricultural sector on the whole. On the whole, agricultural production did respond favourably to the adjustment measures. The incentives created, however, did not produce an even effect throughout the agricultural sector. Over the longer-term, the modern sector has been able to respond more favourably to economic restructuring than the traditional sector.

The primary effect on the cereals sector has been a dramatic increase in the volatility of production levels. While cereal production in the late 1980s and early 1990s did occasionally reach levels five times that of production in 1960, in 2000

Morocco produced roughly the same amount as in 1960 (see figure 4.6). Cereal exports, on the other hand, had been worsening since the early 1970s, and failed to make any significant improvement in the last fifteen years. Imports of cereals continued to climb at a rapid pace (figure 4.3). Throughout the period of adjustment, then, the cereals industry continued its overall deterioration, with extreme volatility compromising any gains in production.

Figure 4.6 Total Cereal Production 1961-2000

Source: FAO Database

Following the debt crisis of the late 1970s and early 1980s, Morocco came under international pressure to curtail public expenditure. Attempts to address this pressure by cutting food subsidies and education resulted in considerable public unrest in 1981 and 1983. The government then was caught in a bind between domestic pressure and pressure from international creditors. Faced with the high levels of social unrest, the government looked to the irrigated agricultural sector to ease the deadlock. The 1981-85 development plan focused on improving irrigation

efficiency, rather than expanding the total area. In fact, the area of irrigated land increased only marginally through the 1980s, breaking the furious pace of construction of the 1970s. For the first time, furthermore, relative budgetary allocations shifted in favour of the dryland sector.

This realignment and curbing of expenditures took a toll on the citrus sector in the initial stages of adjustment. In addition to increasing public savings, however, the adjustment programme sought to improve the balance of payments. This meant trade liberalisation and exchange-rate adjustments, both of which helped to stimulate the export crop-dominated irrigated sector. In fact the citrus industry did respond favourably to the export-oriented climate of the late 1980s: certain citrus exports between 1990 and 2000 increased by a factor of 4.5, reflecting a 25-fold increase from their 1960 level. While cereal producers responded erratically to the new economic climate, the citrus industry unambiguously gained from the situation.

In terms of trade, the adjustment process significantly opened the Moroccan agricultural industry to external markets, both in terms of imports and exports. From what was once a relatively food self-sufficient country, Morocco became increasingly dependent on the international market (see Table 5.4 for the changes in Morocco's food self-sufficiency). Figure 4.7 shows the dramatic export orientation that the adjustment measures produced.

Figure 4.7 Agricultural Exports and Imports by Value 1961-1999

Source: FAO Database

Agricultural policies throughout the post-independence period have developed from the government's need for political compromise – between the urban poor and rural landlords, consumers and international creditors, and so on. The pragmatism of the government, in the end, has underscored a consistent favouring of the modern irrigated farmers over their counterparts in dry agriculture. While the structural adjustment measures likely shifted the internal terms of trade to the advantage of the rural sectors of the economy, the evidence above suggests that those in the agricultural sector were not able to respond equally to the improved incentives. The next chapter will further explore the effects of the adjustment measures on the agricultural economy, within the wider context of Moroccan rural development.

CHAPTER 5 The Rural Sector Under Adjustment

In the years following independence, the state became increasingly involved in the economy, and in the agricultural sector in particular. As outlined in the third chapter, the development of irrigated agriculture featured heavily in the expenditures of the government. Just as important, however, was the government's increasing need to subsidize food prices. In fact, food subsidization came to be the major cause of Morocco's eventual debt crisis. Faced with a failing agricultural sector, the Moroccan government was forced to bridge the growing gap between production and consumption within the country. The interests of consumers and producers rarely converge, and they were particularly divergent in the Moroccan case. Food prices somehow had to be sufficiently high to compensate farmers, but low enough to remain affordable for relatively impoverished consumers. The solution came in the form of heavily, but selectively, subsidized food prices.

In general, the government regulated prices on certain basic consumption goods, including cereals and dairy products, while goods destined for export markets were freely determined. Prices on the first set of goods were essentially frozen until 1972-73.⁵⁶ Growing deficits in domestic production were replaced with relatively affordable imports, creating a market for imported goods at low prices. This system was sustained through the early 1970s by a tripling of international phosphate prices in 1974. Public expenditure more than tripled between 1974 and 1977, as wages and food subsidies were

⁵⁶ Akesbi, 1995, p.119.

increased considerably.⁵⁷ Morocco therefore entered the global debt crisis of the late 1970s and early 80s committed to a maintaining political stability through massive government subsidization.

The beginning of the conflict in the Western Sahara, combined with a 47% reduction in world phosphate prices, presented the government with seriously reduced revenues after 1974. The political cost of reducing expenditure levels meant that the government responded with a policy of deficit spending throughout the second half of the 1970s. Starting in 1976, the budget deficit and current account deficit expanded together, as the foreign debt grew from US\$2.3 billion in 1976 to US\$11.9 billion in 1983. The government twice, in 1978 and 1979, attempted to address these problems, but serious drought, and the second oil shock of 1979 derailed these efforts. More importantly, however, the risk of social unrest from reduced subsidies and wage freezing kept government expenditure to its pre-crisis level. The second attempted IMF reform initiative, for instance, led to a 50% increase in the price of essential consumer goods,⁵⁸ resulting in a series of food riots in Casablanca in the spring of 1981.

Morocco, therefore, continued its expansionist policies until 1983, financing expenditures with largely private external borrowing, significantly increasing debt-servicing costs. By 1983, however, Morocco's economic position was no longer sustainable. In late 1983, the government negotiated a SDR 200 million loan with the

⁵⁷ Morrisson, 1991, p.1633

⁵⁸ The increase in agricultural products occurred on both the consumer and producer sides. Cereal farmers, for instance, faced a similar 50% increase in prices. Ministère de l'Agriculture et de la Réforme Agraire, 1993.

IMF, and early in 1984 the World Bank arranged for US\$600 million in sectoral adjustment loans. This marked the beginning of Morocco's period of adjustment, the next significant episode in the development of the country's agricultural sector.

5.1 Morocco's Structural Adjustment Programme

Expenditure reduction and switching on the scale envisioned by the adjustment programme would inevitably have an effect on income distribution and poverty. What this effect has been, however, has not been clearly established. The disagreement has centred both on the theoretical outcomes of structural adjustment and on the ability to achieve the potential benefits in the implementation of the programmes. Proponents argue that aside from being necessary, structural adjustment has the potential to be welfare enhancing, as expenditures are switched to sectors in which the poor are disproportionately represented. On the other hand, critics maintain that structural adjustment, as outlined by the World Bank and the IMF, are detrimental to both equity and poverty reduction objectives.

The agricultural sector often plays a pivotal role in the restructuring process, and its promotion often provides the basis for those arguing in favour of the welfare gains of structural adjustment. Morocco's experience with adjustment provides an interesting case in discussing the role of agriculture during adjustment, and the resulting effect on the rural population. Morocco implemented relatively orthodox structural adjustment policies, with agricultural export promotion as a cornerstone in the government's

programme. As growth continued to increase during the adjustment period.⁵⁹ Morocco's performance has brought praise from multilateral financial institutes. During the period of adjustment, Morocco managed to increase its agricultural output far more than most countries undergoing adjustment (see Table 5.1). It is often argued, therefore, that Morocco has had a successful experience with adjustment in the agricultural sector (See for instance IMF, 1995). This claim is further substantiated by the argument that Morocco's general economy also expanded during adjustment (Table 5.2). The effect on the rural population, however, has been less clear. Many macroeconomic analyses draw a direct link between rural poverty and agricultural stagnation.⁶⁰ Consequently, any policy that stimulates this sector would, nearly by definition, reduce rural poverty and improve rural-urban disparity.

Table 5.1 Agricultural Production During Adjustment Around the World

<i>Region</i>	<i>% change in agricultural production between 1979/81 and 1988/90</i>
Sub-Saharan Africa	1.33
Near-East/North Africa	1.26
East Asia	1.32
South Asia	1.35
Latin America & Carribean	1.13
Morocco	2.02

Source: FAO, 1995

⁵⁹ Morrisson, 1991, p.1635.

⁶⁰ Cleaver & Donovan, 1994.

Table 5.2 Economic Performance Indicators for Morocco, 1982-86

<i>Indicator</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>
GDP	100.0	100.7	102.6	107.0	116.0
GDP/capita	100.0	98.4	97.7	99.0	104.5
Agriculture	100.0	96.0	96.0	108.0	147.0
Manufacturing	100.0	103.8	102.0	103.0	104.0
Construction	100.0	95.0	90.5	96.3	101.0
Exports (current prices)	100.0	120.0	153.0	174.0	178.0
Tourism receipts	100.0	131.0	170.0	246.0	271.0
Fiscal deficit (% of GDP)	14.1	10.4	11.0	9.0	5.8
Current account deficit (% of GDP)	11.8	7.0	9.4	6.9	1.4

Source: Morrisson, 1991.

This chapter will question the direct link between supply-side agricultural growth policies and rural welfare, through an examination of some errors of omission in two-factor macroeconomic analyses. I will argue that the case of Morocco underlines the importance of historical institutional arrangements in bringing about rural development. This institutional arrangement provides a contextual lens through which macroeconomic policies are refracted. Price-oriented analyses of structural adjustment and rural poverty, therefore, are limited to the extent that they ignore these factors. While many analyses acknowledge the effect of institutional and market rigidities, they do so in relation to efficiency and level of output in the sector. Once agricultural output growth is achieved, the effect on rural poverty is left to be assumed. This chapter will address the self-

evidence of the relationship between agricultural growth and rural poverty alleviation: the institutional context may have just as significant an impact on rural poverty and income distribution, even if sustained output growth is not impeded.

Streeten (1989) defines the primary objectives of adjustment programmes as i) the reduction of a balance-of-payments deficit, ii) the resumption of higher rates of economic growth, and iii) the achievement of flexibility within the economy to prevent future payments and stabilisation problems.⁶¹ In the case of Morocco, the adjustment programme included stabilisation measures to control overall demand, and liberalisation measures to increase supply through structural reforms. Morocco's programme, then, fits the underlying goal of most adjustment programmes: the control of domestic demand, coupled with the stimulation of supply through the promotion of the export sectors.

Table 5.3 Adjustment Programme Measures in Morocco

<i>Stabilisation Measures</i>	<i>Structural Adjustment Measures</i>
- Reduction in food subsidies	- Fiscal reform
- Slower growth in domestic credit	- Lower agricultural subsidies
- Currency devaluation (7% in 1984)	- Higher production prices in agriculture
- Large reduction in investment expenditure	- Break-up of state monopoly on sale of fertilizer and seeds
- Slower growth in public sector employment	- Abolition of price controls
	- Elimination of export duties

⁶¹ Streeten, 1989, p. 4.

	<ul style="list-style-type: none"> - Break-up of state monopoly on agricultural exports - Lower import taxes - Simplification of customs procedures - Higher interest rates
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Source: Morrisson, 1991.

In reorienting the economy towards export promotion, the agricultural sector will inevitably play a critical role. As was seen in Chapter 3 agricultural exports have always been a significant factor in Morocco, both in terms of GDP and employment. During the 1970's, agriculture accounted for more than 20 per cent of GDP, and 45 per cent of employment.⁶² While employment in the agricultural sector has not been as important in Morocco as in other countries, it was still significant enough to feature heavily in Morocco's adjustment programme (Table 5.3).

The World Bank (1989) outlines a standard economic policy package for the expansion of the agricultural sector. This includes the removal of subsidies on agricultural inputs and on consumer food prices, the devaluation of currency, the elimination of agricultural trade and processing monopolies, the deregulation of agricultural prices, and reduced agricultural taxation.⁶³ From Table 5.3, it is evident that Morocco's agricultural reforms fit the orthodox World Bank prescription. Within this policy package, however, the crucial element is the price of agricultural outputs.

⁶² IMF, 1995, p.6.

⁶³ World Bank, 1989.

Although raising agricultural prices is often seen as the most effective incentive for increased production, it is also widely used as the only viable short-term variable to affect output. In combination with increased output, currency devaluation and trade liberalisation, agriculture would drive the expansion of the tradable sector within the economy.

Unlike many other agricultural reform initiatives in other countries during this time, the reform of the agricultural sector in Morocco produced marked improvements in output, although climatic factors affect output figures substantially. In addition to increased overall output, the sector has also shifted significantly towards tradable cash crops. The analysis of the cereal and citrus industries in chapter 4 above underlines the extent of this shift. Furthermore, this shift can be seen within the cereals sector itself: Between 1976 and 1986, the area devoted to soft wheat – essentially a cash crop – has doubled. Overall, per capita food production increased 13 per cent in the 1979-85 period.⁶⁴ Even over the longer term, average production and growth rates during adjustment were significantly higher than the previous decade. Importantly, however, this increased output was not evenly distributed across the agricultural sector. The disproportionate improvement in the tradable sector is revealed by the parallel decrease in food self-sufficiency over the same period. Table 5.4 outlines these divergent trends in agriculture.

⁶⁴ Seddon, 1989, p.187.

Table 5.4 Agricultural Performance and Self-Sufficiency in North Africa

	<i>Algeria</i>	<i>Egypt</i>	<i>Libya</i>	<i>Morocco</i>	<i>Sudan</i>	<i>Tunisia</i>
Production						
Annual rate of change						
1970-80	1.3	1.5	6.2	1.0	3.4	2.1
1981-88	4.3	4.1	2.5	6.4	1.4	2.7
Annual rate of per capita productivity						
1970-80	-1.8	-0.9	1.7	-1.3	0.4	-0.2
1981-88	1.2	1.3	-1.7	3.6	-1.6	0.2
Self-sufficiency rate of cereals						
1969-71	74	77	25	95	97	61
1983-85	33	49	24	67	97	63

Source: *FAO Production Yearbook*, various years; *FAO 1990 Country Tables*; FAO, 1988.

Despite occasional delays, the Moroccan government has followed IMF and World Bank guidelines fairly diligently in its approach to adjustment. Its performance in this respect has brought praise from the Bretton Woods institutions.⁶⁵ Morocco, then, provides a case in which an adjustment programme substantially based on the agricultural sector produced noticeable increases in agricultural output and exports. With a shift in sectoral terms-of-trade toward agriculture, production is increased, and employment should increase in the rural areas accordingly. The following section will attempt to argue that increased agricultural production will not necessarily lead to improved equity or a reduction in absolute poverty in rural areas.

⁶⁵ IMF, 1995.

5.1 Agricultural Output and Rural Welfare

From Chapter 2, we recall two important conclusions from the historical development of the rural sector. (1) Morocco's rural population became increasingly divided, both during and after the colonial period. The transition from pastoral to agricultural production, as well as the 'privatization' of land ownership, resulted in a small stratum of the population controlling most of Morocco's productive land, while the number of landless labourers and sub-marginal peasants grew dramatically. (2) While the vast majority of rural Moroccans depend on agriculture for their livelihood, food imports and reliance on the market for subsistence goods has become of major importance in these areas. The underlying heterogeneity of the rural population in their access to productive assets, combined with the increasing reliance on markets, will be important in evaluating the effects of increased agricultural output under adjustment.

The relative poverty of the rural areas is not usually denied: it is often pointed out that the very large majority of the poor live in rural areas. As a consequence, effective poverty reduction will involve increasing incomes in those rural areas. Agriculture, therefore, can provide a powerful tool for the reduction of poverty: "the real income of farmers, who constitute by far the poorest segment of the population, should rise as a result of increases in agricultural producer prices..."⁶⁶ This analysis, however, assumes a degree of homogeneity within the rural population, arguing that increased prices in tradable agricultural goods will provide uniform benefits to those living in rural areas. As

⁶⁶ World Bank, 1986, p.7, quoted in Seddon, 1989, p.187.

was seen in Chapter 2, however, the rural population is not homogenous, and therefore can be affected differently by changes in the price of agricultural goods.

Improved income will arise from increased returns on productive assets. In rural areas, these productive assets will overwhelmingly be either land or labour. I will deal with each in turn. The benefits accruing to landowners from higher prices will depend on their ability to produce a marketable surplus beyond their own consumption needs. Addison and Demery, however, have documented the assumption of a generally inverse relationship between the probability of a household being in poverty and the size of the marketable surplus.⁶⁷ Furthermore, in Morocco the level of private agricultural investment is a direct function of the size of the property, and will affect the ability to mobilize factors of production in response to price increases.⁶⁸ To examine the potential gains, then, it is necessary to take into account how different varieties of productive land are divided and distributed among the land-owning population. At the root of the situation is a rural society in flux, as historical forms of communal land ownership, centred on the family, interact with European influences, under the pressure of an increasingly market-integrated sector and the development needs of the country.

Two factors of primary importance in the Moroccan case are the system of land tenure, and the relative importance of irrigated land versus rain-fed land. As seen in chapter 2, Morocco's system of land tenure has developed over many centuries, under the influence of multiple judicial systems. Most notably, the interaction between Islamic land

⁶⁷ Addison & Demery, 1989, p.73.

⁶⁸ Besouda, 1998, p.62.

ownership laws and those under the protectorate has shaped the use and distribution of land in Morocco. The division between privately owned and commonly owned land adds a level of complexity to the distribution of gains from increased output. Beginning under the French Protectorate, land ownership underwent significant changes over the last century. In addition to appropriating one fifth of the country's arable land under new legal statutes, the Protectorate introduced the processes of intensified agriculture for capitalist production. While the appropriated lands were regained in 1956, the shift toward private ownership remained. Following Independence, privately designated land constituted 81 per cent of the total arable land surface, containing 89 per cent of the country's agricultural exploitation.⁶⁹ The period also marked the beginning of efforts by the Moroccan government to develop systems of 'modern' capitalist agriculture and marketing, displacing any initiatives for significant land redistribution.⁷⁰

In terms of ownership, the factors described above have resulted in a rural sector in which land is distributed highly unequally. Production and revenue is also distributed unevenly, such that producer price increases will systematically favour non-poor landholders. More than 75 per cent of agricultural plots are smaller than five hectares, and are dedicated primarily to non-income-earning sustenance agriculture. Besouda (1998) points to the lack of resources to intensify production, as well as the need to compensate for reduced available land with raising livestock.⁷¹ Only a small minority of

⁶⁹ Besouda, 1998, p.59.60.

⁷⁰ The promotion of far-reaching agrarian reform by the Ibrahim Government resulted in its dismissal in 1960. Under the subsequent milder reform initiative only 2 per cent of total arable land was eligible. Seddon, 1989, p.176; Besouda, 1998, p.59.

⁷¹ Besouda, 1998, p.63.

farmers, therefore, would benefit from the changes in the economic environment, such as higher prices and a devalued currency.

The government's focus on creating a modern high-output agricultural sector has led to policies of large-scale irrigation throughout its post-colonial history. The increased productivity of irrigated land placed it at the forefront of Morocco's agricultural expansion, as it accounted for much of the sector's growth through the mid-1960s and 1970s. This renewed emphasis on the irrigated sector can be clearly seen in the *Plan triennial 1965-67*, for instance. The focus on irrigated farming in turn has produced a significant bias against dryland farming in terms of institutional support and infrastructure. As land reform initiatives had been weak, the returns from this growth were concentrated among the agrarian bourgeoisie: the development of irrigated areas produced significant growth, but did not address the structural inequalities in the rural areas.⁷² While occasional efforts were made to promote dryland farming,⁷³ the emphasis on exportable surpluses under adjustment has guaranteed a major role for the irrigated sector. Irrigation policies, therefore, have continued to skew the allocation of returns from increased agriculture production within the rural population. From the above, I would argue that for those with land as their primary productive asset, it is misleading to say that broad price-oriented policies will benefit the rural sector in an equitable way.

⁷² Seddon, 1989, p.179.

⁷³ In 1960, the Moroccan Government introduced 'Operation Plough' to promote dry-land farming. The plan, however, was soon abandoned after negligible results. See chapter 3 on dryland development programmes.

The structural change initiated by adjustment programmes will inevitably have a significant impact on the level and composition of employment, as human resources are reallocated to shift production toward tradables.⁷⁴ Following the Heckscher-Ohlin theory of the two-sector economy, liberalised trade will benefit the sector whose production is intensive in factors with which a country is abundantly endowed. Consequently, trade liberalisation and export promotion in developing countries is often seen to benefit employment, as the economy shifts toward labour-intensive industries and away from capital-intensive industries that had flourished behind trade barriers. Theoretically, this should once again favour the agricultural sector. If the emphasis is still significantly on the irrigated, however, this would no longer be the case: the capital-intensive nature of irrigated development would not disproportionately benefit rural labour. This is not to say that labour would not achieve any gains from increased output in the modern sector, merely that output changes in the modern sector would affect employment less than a similar change in the traditional sector.

For those with labour as their productive asset, the issue of rural employment under adjustment will obviously be of great importance. This, however, will not be the only adjustment-induced factor affecting their welfare. As landless labourers rely on the market for their food purchases, the general price level of these subsistence goods provides a second key factor in determining the effects of adjustment policies. This portion of the rural population will be affected not only by adjustment policies as they affect agricultural output, but also by the increased price of imports through a devalued currency and cuts to food subsidies.

⁷⁴ Addison & Demery, 1989, p.79.

The price-related policies of adjustment involve both the increase of producer prices, and an increase in domestic and imported consumer prices (the latter as a result of a devalued currency and reduced food subsidies). Throughout the adjustment period, Morocco continued to produce significant amounts of cereals, while imports also increased dramatically (Table 5.4). While the returns from increased production depend on the distribution of assets within the agricultural sector, the burden of increased prices for imports will necessarily affect those who rely on the market for food – landless labourers and sub-marginal peasants. The effect of adjustment on the welfare of the landless rural population, therefore, cannot be limited to aggregate levels of rural employment.

Table 5.4 Cereal Production vs. Cereal Imports in Morocco (1980-1985) (thousands of quintals)

Year	Cereal Production	Cereal Imports
1980	45,047	17,792
1981	21,218	26,582
1982	49,045	19,126
1983	35,734	19,437
1984	37,499	27,229
1985	53,005	21,369

Source: See Chapter 3 for sources on cereal trade

The claims of benefits to the wage-earning rural population rely heavily on the misplaced assumption of homogeneity in the rural population, as discussed earlier. Many analyses of the impact of adjustment based on two-sector economic models rely on the mutual exclusivity of these sectors. In the case of agriculture, this results in the assumption that increased food prices will unambiguously improve the welfare of the rural population as a whole, as they rely nearly exclusively on the agricultural sector. However, in assessing the impact on rural populations, and especially with respect to landless labourers, the significant reliance on food purchases in these areas must be taken into account. The portion of the rural population in Morocco that relies to a large extent on the market for subsistence goods is between 30 and 40 per cent.⁷⁵ Therefore, the rise in agricultural prices and the reduction in consumer subsidies, regarded by the World Bank as one of the crucial elements in the programme to increase agricultural output, will adversely and disproportionately affect the rural poor. Once again, underlying the argument for a clear and positive relationship between agricultural growth and rural welfare is the reductionist view of the rural population, ignoring the linkages between producers and consumers both within the rural population and within the household. In terms of landholders/labourers and labourers, the shift toward export promotion will be ambiguous.

While Morocco faced many of the same macroeconomic imbalances as other developing countries in the late 1970s, both overall economic and agricultural growth continued through the following period of adjustment. Therefore, Morocco proves to be an interesting case study in analysing the link between adjustment policies and issues of

⁷⁵ Seddon, 1989, p.187.

income distribution and poverty. The evidence from Morocco, however, disputes the existence of a clear positive relationship between supply-side agricultural policies and rural welfare.

With the objective of sectoral adjustment toward tradables, agriculture often figures prominently in adjustment programmes. Morocco was not an exception to this: beginning in the 1980s, the Moroccan government aimed to bring about growth in this sector, primarily through supply-side incentives in price and exchange rate policies. This was a reversal of previous policies, which were seen to be systematically discriminating against agriculture to support uncompetitive urban industries. In terms of the overall economy, this transition had the effect of changing the sectoral terms-of-trade in favour of rural areas. At the expense of urban industrial sectors, which had previously benefited from protective policies, the agricultural industry expanded accordingly. As a result, incomes, both from land and labour, as producers earn higher returns. Pointing to the relative incidence of poverty between rural and urban areas, adjustment measures are therefore often argued to benefit overall income distribution in the economy, but also the poor in rural areas.

The institutional arrangement in a particular country is often cited as one of the potential impediments to the effective implementation of adjustment measures. Included in these potential impediments may be anything from a weak judicial system for the protection of property rights, to poor financial institutions. These institutional factors share one characteristic: they are largely said to affect the ability of the industry to

significantly expand production. That is, they are dealt with purely in terms of their effect on the price elasticity of supply, or the response to changes in producer prices.

Herein lies an important omission in the argumentation. While specific institutional arrangements may well affect the ability of producers to respond to price incentives one way or another, they also have a wider impact. As we have seen in the Moroccan case, institutional factors have changed the socio-political landscape of the rural areas over the course of many years. This affects, more generally, the legal framework of land ownership, and the distribution of the means of production; more specifically, it will affect the consumption and production patterns of individual households. That is, it is a formative element in the composition of the rural population. As a result, how income is distributed in these areas will largely be a function of the historical institutional arrangement in place. Beyond affecting the ability of producers to respond to price changes, this institutional context will also affect the ability of all to gain from the increased production. The argument that policies of price-induced agricultural growth will unambiguously improve rural poverty is weakened by this negation of the distributive impact of the specific institutional context.

In the case of Morocco, the differentiated impact of adjustment measures on the rural sector described above has meant continued favouritism towards the trade-oriented modern sector, and a conscious neglect of traditional farming. Despite the preference accorded to the agricultural sector as a whole, the policies of adjustment necessarily promoted export-oriented industries over those supplying domestic demand. This

unbalanced effect on the agricultural sector, coupled with the ambiguous effect of adjustment related policies on the rural population, clearly demonstrates that adjustment did not bring a reversal in the long-term trajectory of traditional agriculture. Given the context of Moroccan agriculture, growth through export promotion alone will not prove to be an effective solution to the country's agricultural crisis.

CHAPTER 6 CONCLUSION

From the beginning of French influence in the area through to the period of structural adjustment in the late 1980s, Morocco's agricultural sector has undergone a dramatic transformation. The most striking feature of this development has been its duality: certain areas in the coastal lowlands boast a modern and prosperous farming sector, while most of the traditionally-farmed areas have stagnated or deteriorated in the same period. This has been the result of several influences over the past century: Relations between urban centres and outlying areas before colonization, French colonial policies, and the neglect of the post-colonial government.

The previous chapters, however, point to the fact that it is the interaction between these influences, rather than their isolated effects, that is important in establishing the causes of rural underdevelopment in Morocco. The important elements, then, are how colonial policies on land ownership were affected by existing systems, and subsequently how the post-colonial government developed its own agricultural policies in the context of colonization. Morocco's colonization was not a wholesale annexation of the country, nor did Morocco achieve its independence by overturning the colonial system and charting a radically different course. Instead, each period became an additional contextual layer superimposed on the previous.

Despite the transformation of the rural areas, there has been a continuity in the pattern of rural development throughout each of the different phases of the last century. Throughout this time, government policy has consistently favoured the modern irrigated

sector, while largely ignoring traditionally farmed areas. Both during the colonial and postcolonial periods, this policy was followed for similar political purposes. During the protectorate, irrigated areas were developed to the benefit of European landowners, while creating of image of promoting agricultural development. Faced with a growing land-owning rural elite, the postcolonial government favoured the modern sector to secure its base of support, while giving the impression of supporting the rural areas.

This paper has outlined four major factors behind the continued dualistic development of Moroccan agriculture, from before the protectorate until today. (1) When French influence in the region finally led to the protectorate, the French resident generals purposefully decided not to replace entirely the system of land ownership. Instead, over a period of many years the existing claims were codified, and eventually brought under state control. The result is that a certain number of the Moroccan elite were able to benefit from the new system, namely those with access to, or within, the administration and its legal procedures.⁷⁶ Early on during the protectorate, then, the Moroccan agrarian bourgeoisie was growing in importance.

(2) The emphasis on the irrigated sector starting in the 1930s created the basis for modern Morocco's agricultural policy until today. Begun after World War II, this policy consisted of nearly an exclusive focus on investment in irrigated agriculture, the promotion of irrigated export crops, including citrus fruit and vegetables, on large European landholdings, and the production of strategic crops for national consumption on

⁷⁶ Recall that in addition to the 6,000 European landowners in the modern sector, 1,700 Moroccans controlled significant holdings at the time of independence.

smaller state-supported farms. With these policies diligently implemented, the dualism of Moroccan agriculture would increase dramatically over the course of the protectorate.

(3) The new Moroccan government after 1956 chose a conservative, *laissez-faire* course of action. In the uncertainty following independence, the new king moved to ensure his support among the elite, rather than reversing the discriminatory policies of the protectorate. This has resulted in three significant characteristics of post-independence agriculture.

First, the Moroccan elite replaced the European landowners, either by purchasing land from the departing *colons* or by expanding their existing holdings. Unlike most of North Africa, the Moroccan government did not address the issue of private purchase of colonized land until nearly two decades after independence, while the problem of land concentration has never been effectively dealt with.

Second, public investment in contemporary Morocco has continued to focus heavily on the irrigated sector. The modern sector has continued to expand with little deviation since it began during the protectorate. Since independence, nearly twenty new dams have been constructed.⁷⁷ The citrus fruit and cereals comparisons from Chapter 3 show the dramatic impact of this agricultural policy.

Third, the traditional sector has been largely left behind in Morocco's economic development. Representing around 70% of cultivated land and 90% of Morocco's

⁷⁷ Swearingen, 1987, p.188.

farmers, this sector has consistently been neglected by government investment. Projects such as Operation Plough and various aborted land reform initiatives attest to the lack of political will to address the problems facing the traditional sector.

(4) Within the context of Morocco's colonial and postcolonial agricultural development, the emphasis on supply stimulation and export promotion during adjustment has continued to disproportionately benefit the modern, export-oriented sector. While the agricultural sector on the whole stood to gain from the adjustment measures, the effect on the traditional farming sector within the agricultural economy is mixed. The potential benefits of increased agricultural trade rely either on the ability to increase one's marketable surplus, or to provide labour. In the first instance, available statistics on land concentration and the number of virtually landless in rural areas suggest that many would not reap the benefits of increased producer prices.

For wage labourers, on the other hand, the higher agricultural prices, and lower food subsidies, would have an ambiguous effect at best. Data on the imports of cereal, the major staple of Moroccans, indicates the increased reliance on the market for subsistence goods – Morocco's food deficit has continued to grow throughout the post-independence period.

The continuity in Morocco's agricultural development can be seen both in the government's policy documents as well as in the actual outputs of the agricultural industry. To reverse this, Morocco will need to undertake a sustained and active

campaign to improve the traditional farming sector. The problems of traditional agriculture have their roots in the past, and successful policy will only come from addressing these underlying factors. As in the past, the government's policies reflect a need for political stability through appeasement. Until now this has meant a systematic favouring of the rural elite that has persisted through several fundamental changes from the protectorate through to independence and into the current period of economic liberalization.

STATISTICAL APPENDICES

6.1 APPENDIX I Agriculture and GDP

Table 1. Agricultural GDP (1960-1998)

YEAR	MILLIONS OF US \$ ⁷⁸
1960	469.2
1965	678.5
1970	791.2
1975	1927.2
1980	3229.2
1985	2133
1990	4035.2
1995	4537.7
1998	5362.2

Table 2. Agriculture as a Share of GDP (1960-1998)

YEAR	%
1960	23
1965	23
1970	20
1975	21
1980	18
1985	18
1990	16
1995	14
1998	16

Table 3. Growth of GDP and Agricultural Production (1960-1998)

YEAR	AGRICULTURE (%)	GDP (%)
1960-70	4.7	4.1
1970-80	0.8	5.6
1980-90	6.4	4
1990-98	0.3	2.1

⁷⁸ All dollar figures are in current US dollars, unless otherwise noted.

6.2 APPENDIX II Agriculture and Trade Figures

Table 1. Total Agricultural Exports, by Value (1961-1999)

YEAR	US \$1000	YEAR	US \$1000
1961	135,755	1981	1,092,135
1962	131,780	1982	787,959
1963	120,587	1983	716,952
1964	152,219	1984	876,429
1965	174,138	1985	746,107
1966	164,727	1986	702,193
1967	174,570	1987	671,312
1968	158,921	1988	722,540
1969	118,030	1989	818,864
1970	159,734	1990	799,263
1971	194,297	1991	840,480
1972	193,543	1992	1,156,118
1973	350,859	1993	1,237,831
1974	574,487	1994	1,162,131
1975	807,998	1995	1,825,390
1976	567,795	1996	1,697,727
1977	590,517	1997	1,431,057
1978	645,213	1998	1,560,308
1979	781,834	1999	1,516,916
1980	921,699		

Table 2. Total Agricultural Imports, by Value (1961-1999)

YEAR	US \$1000	YEAR	US \$1000
1961	136,547	1981	435,786
1962	148,892	1982	374,803
1963	187,310	1983	363,711
1964	194,502	1984	311,273
1965	205,594	1985	366,566
1966	193,332	1986	450,045
1967	201,797	1987	456,572
1968	216,909	1988	572,266
1969	239,510	1989	520,439
1970	235,216	1990	646,682
1971	220,953	1991	669,786
1972	307,971	1992	581,064
1973	422,909	1993	508,901
1974	363,087	1994	597,573
1975	337,061	1995	780,448
1976	372,296	1996	895,542
1977	337,731	1997	831,533
1978	429,586	1998	839,839
1979	505,390	1999	882,882
1980	606,288		

Table 3. Agricultural Balance of Trade (1961-1999)

YEAR	INDEX	YEAR	INDEX
1961	10	1981	-53
1962	13	1982	-28
1963	22	1983	-24
1964	21	1984	-57
1965	20	1985	-32
1966	18	1986	-7
1967	19	1987	-2
1968	24	1988	7
1969	34	1989	-19
1970	26	1990	8
1971	20	1991	11
1972	38	1992	-44
1973	41	1993	-64
1974	-1	1994	-44
1975	-35	1995	-83
1976	3	1996	-42
1977	-7	1997	-15
1978	4	1998	-33
1979	0	1999	-17
1980	6	1981	-53

Table 4. Agricultural Imports by Value Index (1961-1999)

YEAR	INDEX	YEAR	INDEX
1961	17	1981	138
1962	16	1982	98
1963	15	1983	90
1964	19	1984	111
1965	22	1985	93
1966	21	1986	87
1967	22	1987	82
1968	20	1988	89
1969	14	1989	101
1970	20	1990	97
1971	24	1991	102
1972	24	1992	140
1973	44	1993	150
1974	72	1994	141
1975	102	1995	221
1976	71	1996	206
1977	73	1997	171
1978	80	1998	188
1979	97	1999	179
1980	116		

Table 5. Agricultural Imports by Quantity Index (1961-1999)

YEAR	INDEX	YEAR	INDEX
1961	48	1981	145
1962	46	1982	114
1963	32	1983	112
1964	35	1984	146
1965	38	1985	122
1966	51	1986	103
1967	62	1987	126
1968	50	1988	98
1969	27	1989	88
1970	40	1990	95
1971	54	1991	116
1972	41	1992	182
1973	69	1993	215
1974	63	1994	127
1975	91	1995	229
1976	70	1996	189
1977	96	1997	183
1978	99	1998	245
1979	99	1999	262
1980	107		

Table 6. Agricultural Exports by Value Index (1961-1999)

YEAR	INDEX	YEAR	INDEX
1961	27	1981	85
1962	29	1982	70
1963	37	1983	66
1964	40	1984	54
1965	42	1985	61
1966	39	1986	80
1967	41	1987	80
1968	44	1988	96
1969	48	1989	82
1970	46	1990	105
1971	44	1991	113
1972	62	1992	96
1973	85	1993	86
1974	71	1994	97
1975	67	1995	138
1976	74	1996	164
1977	66	1997	156
1978	84	1998	155
1979	97	1999	162
1980	122		

Table 8. Agricultural Exports by Quantity Index (1961-1999)

YEAR	INDEX	YEAR	INDEX
1961	105	1981	98
1962	128	1982	87
1963	141	1983	81
1964	140	1984	81
1965	131	1985	86
1966	111	1986	91
1967	114	1987	78
1968	132	1988	119
1969	149	1989	98
1970	154	1990	88
1971	117	1991	114
1972	142	1992	90
1973	160	1993	90
1974	122	1994	98
1975	103	1995	92
1976	115	1996	108
1977	101	1997	107
1978	109	1998	121
1979	94	1999	132
1980	118		

6.3 APPENDIX III Cereal Production Figures

Table 1. Total Cereal Production (1961-2000)

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1961	1,537,830	1981	2,130,300
1962	3,511,979	1982	4,916,509
1963	3,856,071	1983	3,581,070
1964	3,403,305	1984	3,759,130
1965	3,486,365	1985	5,312,160
1966	2,179,840	1986	7,824,550
1967	3,523,200	1987	4,336,810
1968	6,352,730	1988	7,958,960
1969	4,089,600	1989	7,428,590
1970	4,251,560	1990	6,276,190
1971	5,352,461	1991	8,664,685
1972	5,167,140	1992	2,949,650
1973	3,228,970	1993	2,817,820
1974	4,809,380	1994	9,638,630
1975	3,728,620	1995	1,783,230
1976	5,713,380	1996	10,103,620
1977	2,888,140	1997	4,098,200
1978	4,744,560	1998	6,631,590
1979	4,103,160	1999	3,858,953
1980	4,514,720	2000	2,005,875

Table 2. Per 1000 Cereal Production (1961-1999)

YEAR	KG/1000 PEOPLE	YEAR	KG/1000 PEOPLE
1961	129	1981	107
1962	286	1982	243
1963	306	1983	173
1964	263	1984	177
1965	262	1985	245
1966	159	1986	354
1967	250	1987	192
1968	438	1988	345
1969	274	1989	316
1970	278	1990	262
1971	341	1991	356
1972	321	1992	119
1973	196	1993	112
1974	285	1994	377
1975	215	1995	69
1976	323	1996	382
1977	159	1997	152
1978	256	1998	242
1979	217	1999	138
1980	233		

Table 3. Total Area Under Cereal Cultivation (1961-2000)

YEAR	HECTARES	YEAR	HECTARES
1961	3,772,884	1981	4,391,000
1962	3,285,652	1982	4,287,300
1963	4,326,300	1983	4,712,100
1964	3,938,680	1984	4,488,300
1965	3,956,110	1985	4,792,400
1966	4,653,000	1986	5,182,870
1967	4,839,060	1987	5,080,200
1968	4,712,400	1988	5,322,300
1969	4,642,400	1989	5,531,900
1970	4,513,200	1990	5,603,300
1971	4,684,325	1991	5,498,300
1972	4,610,100	1992	5,020,100
1973	4,704,200	1993	5,027,800
1974	4,572,000	1994	6,081,400
1975	4,199,900	1995	3,993,400
1976	4,811,900	1996	5,988,600
1977	4,963,300	1997	4,910,400
1978	4,747,800	1998	5,904,700
1979	4,421,500	1999	5,176,712
1980	4,428,550	2000	5,444,400

Table 4. Cereal Yields (1961-2000)

YEAR	HG/HA	YEAR	HG/HA
1961	4.076	1981	4.852
1962	10.689	1982	11.468
1963	8.913	1983	7.600
1964	8.641	1984	8.375
1965	8.813	1985	11.085
1966	4.685	1986	15.097
1967	7.281	1987	8.537
1968	13.481	1988	14.954
1969	8.809	1989	13.429
1970	9.420	1990	11.201
1971	11.426	1991	15.759
1972	11.208	1992	5.876
1973	6.864	1993	5.604
1974	10.519	1994	15.849
1975	8.878	1995	4.465
1976	11.873	1996	16.871
1977	5.819	1997	8.346
1978	9.993	1998	11.231
1979	9.280	1999	7.454
1980	10.195	2000	3.684

6.4 APPENDIX IV Cereal Trade Figures

Table 1. Total Cereal Exports, by Quantity (1961-1999)

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1961	62,190	1981	17,742
1962	149,841	1982	18,579
1963	311,512	1983	5,970
1964	157,090	1984	8,112
1965	112,016	1985	4,661
1966	40,116	1986	2,016
1967	33,555	1987	1,850
1968	68,043	1988	271,303
1969	216,088	1989	3,334
1970	169,155	1990	2,426
1971	34,926	1991	1,457
1972	44,203	1992	477
1973	34,488	1993	70
1974	30,477	1994	39,468
1975	34,051	1995	32,397
1976	27,790	1996	34,363
1977	11,232	1997	62,073
1978	19,534	1998	91,212
1979	17,447	1999	64,751
1980	22,159		

Table 2. Total Cereal Exports, by Value (1961-1999)

YEAR	US \$1000	YEAR	US \$1000
1961	6,916	1981	8,463
1962	14,245	1982	9,404
1963	17,054	1983	1,972
1964	11,158	1984	2,556
1965	8,072	1985	1,391
1966	3,757	1986	649
1967	4,929	1987	506
1968	11,122	1988	25,537
1969	15,408	1989	1,657
1970	9,996	1990	1,186
1971	4,095	1991	943
1972	6,997	1992	244
1973	8,304	1993	40
1974	9,977	1994	10,323
1975	15,110	1995	8,471
1976	13,705	1996	9,433
1977	4,413	1997	15,204
1978	5,229	1998	20,036
1979	5,542	1999	9,488
1980	8,886		

Table 3. Total Cereal Imports, by Quantity (1961-1999)

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1961	589,265	1981	2,723,907
1962	480,009	1982	1,975,099
1963	199,411	1983	2,014,536
1964	253,613	1984	2,769,807
1965	323,563	1985	2,176,605
1966	668,077	1986	1,609,943
1967	919,033	1987	2,235,806
1968	632,782	1988	1,643,210
1969	156,587	1989	1,362,512
1970	419,062	1990	1,605,430
1971	772,892	1991	1,956,769
1972	478,677	1992	3,094,681
1973	1,059,378	1993	3,652,499
1974	890,940	1994	1,692,451
1975	1,508,826	1995	3,596,320
1976	1,051,646	1996	2,889,998
1977	1,419,562	1997	2,761,614
1978	1,689,149	1998	4,088,045
1979	1,653,996	1999	4,379,395
1980	1,820,872		

Table 4. Total Cereal Imports, by Value (1961-1999)

YEAR	US \$1000	YEAR	US \$1000
1961	35,015	1981	487,636
1962	28,479	1982	302,123
1963	11,465	1983	309,341
1964	15,730	1984	427,893
1965	20,650	1985	298,474
1966	48,557	1986	192,580
1967	64,207	1987	201,736
1968	45,022	1988	207,458
1969	10,583	1989	231,579
1970	29,727	1990	212,771
1971	55,616	1991	210,310
1972	36,997	1992	403,134
1973	133,732	1993	466,029
1974	185,296	1994	220,958
1975	277,080	1995	616,913
1976	172,353	1996	608,316
1977	160,808	1997	468,893
1978	227,035	1998	548,795
1979	276,695	1999	563,154
1980	351,463		

6.5 APPENDIX V Citrus Production Figures

Table 1. Total Citrus Production (1961-2000)

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1961	501,500	1981	995,400
1962	507,000	1982	1,029,400
1963	508,000	1983	979,400
1964	645,000	1984	1,040,500
1965	546,000	1985	983,500
1966	657,800	1986	1,205,800
1967	767,800	1987	997,400
1968	875,700	1988	1,231,000
1969	808,000	1989	1,441,000
1970	961,400	1990	1,039,000
1971	811,500	1991	1,462,000
1972	816,800	1992	1,111,000
1973	1,005,100	1993	1,229,500
1974	913,900	1994	1,324,300
1975	688,700	1995	997,300
1976	723,900	1996	1,392,806
1977	861,100	1997	1,229,500
1978	1,081,700	1998	1,596,700
1979	927,100	1999	1,311,200
1980	1,084,100	2000	1,405,700

Table 2. Per 1000 Citrus Production (1961-2000)

YEAR	KG/1000 PEOPLE	YEAR	KG/1000 PEOPLE
1961	42	1981	50
1962	41	1982	51
1963	40	1983	47
1964	50	1984	49
1965	41	1985	45
1966	48	1986	55
1967	54	1987	44
1968	60	1988	53
1969	54	1989	61
1970	63	1990	43
1971	52	1991	60
1972	51	1992	45
1973	61	1993	49
1974	54	1994	52
1975	40	1995	38
1976	41	1996	53
1977	48	1997	46
1978	58	1998	58
1979	49	1999	47
1980	56		

Table 3. Total Area under Citrus Cultivation (1961-2000)

YEAR	HECTARES
1985	58,950
1986	69,950
1987	69,950
1988	69,950
1989	72,250
1990	73,150
1991	73,750
1992	73,650
1993	74,440
1994	74,900
1995	75,700
1996	75,344
1997	75,400
1998	75,700
1999	86,500
2000	70,850

Table 4. Citrus Yields (1961-2000)

YEAR	HG/HA
1985	166,836
1986	172,380
1987	142,588
1988	175,983
1989	199,446
1990	142,037
1991	198,237
1992	150,849
1993	165,167
1994	176,809
1995	131,744
1996	184,860
1997	163,064
1998	210,925
1999	151,584
2000	198,405

6.6 APPENDIX VI Citrus Trade Figures

Table 1. Orange Exports, by Quantity (1961-1999)

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1961	304,368	1981	458,891
1962	299,372	1982	416,594
1963	309,278	1983	407,876
1964	413,613	1984	381,561
1965	358,901	1985	394,677
1966	367,776	1986	409,980
1967	423,005	1987	340,251
1968	483,052	1988	412,950
1969	437,550	1989	427,103
1970	519,035	1990	344,851
1971	447,761	1991	517,036
1972	453,125	1992	344,532
1973	526,400	1993	314,741
1974	438,089	1994	314,217
1975	366,600	1995	253,618
1976	387,247	1996	428,042
1977	412,829	1997	317,519
1978	500,447	1998	404,897
1979	385,594	1999	370,961
1980	577,854		

Table 2. Tangerine, Mandarin, Clementine, Satsuma Exports, by Quantity (1961-1999)

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1961	32,705	1981	171,499
1962	33,237	1982	176,318
1963	41,187	1983	131,885
1964	53,234	1984	130,319
1965	51,039	1985	167,149
1966	65,667	1986	161,922
1967	65,665	1987	145,246
1968	82,494	1988	166,284
1969	110,538	1989	124,038
1970	80,830	1990	127,217
1971	77,529	1991	159,957
1972	130,635	1992	156,219
1973	170,342	1993	193,419
1974	103,926	1994	184,105
1975	78,183	1995	160,664
1976	133,319	1996	203,012
1977	137,816	1997	198,367
1978	161,218	1998	203,431
1979	188,375	1999	255,846
1980	192,237		

Table 3. Orange Exports, by Value (1961-1999)

YEAR	US \$1000	YEAR	US \$1000
1961	35,603	1981	132,690
1962	33,226	1982	105,158
1963	41,977	1983	104,825
1964	47,524	1984	80,109
1965	49,382	1985	85,918
1966	50,688	1986	122,105
1967	49,764	1987	110,975
1968	60,228	1988	127,313
1969	51,427	1989	99,456
1970	52,400	1990	122,818
1971	58,626	1991	149,512
1972	60,175	1992	102,701
1973	72,834	1993	89,581
1974	60,689	1994	83,915
1975	68,672	1995	112,684
1976	80,609	1996	177,487
1977	85,419	1997	127,991
1978	123,567	1998	146,355
1979	137,880	1999	124,658
1980	200,994		

Table 4. Tangerine, Mandarin, Clementine, Satsma Exports, by Value (1961-1999)

YEAR	US \$1000	YEAR	US \$1000
1961	5,710	1981	75,082
1962	5,430	1982	74,335
1963	8,204	1983	51,049
1964	12,910	1984	39,808
1965	12,001	1985	61,826
1966	14,431	1986	67,088
1967	17,836	1987	62,724
1968	22,411	1988	68,573
1969	24,991	1989	37,968
1970	17,965	1990	46,549
1971	18,266	1991	59,578
1972	32,824	1992	68,573
1973	47,297	1993	64,263
1974	28,536	1994	66,396
1975	31,538	1995	88,214
1976	53,563	1996	131,651
1977	50,948	1997	121,570
1978	70,579	1998	123,027
1979	82,183	1999	141,752
1980	93,734		

6.7 APPENDIX VII Population Figures

Table 1. Total Population (1961-1999)

YEAR	1000	YEAR	1000
1961	11,948	1981	19,822
1962	12,275	1982	20,271
1963	12,611	1983	20,726
1964	12,959	1984	21,186
1965	13,323	1985	21,647
1966	13,703	1986	22,112
1967	14,097	1987	22,580
1968	14,500	1988	23,044
1969	14,906	1989	23,496
1970	15,310	1990	23,931
1971	15,710	1991	24,346
1972	16,108	1992	24,745
1973	16,505	1993	25,137
1974	16,903	1994	25,540
1975	17,305	1995	25,966
1976	17,710	1996	26,417
1977	18,118	1997	26,890
1978	18,531	1998	27,377
1979	18,952	1999	27,867
1980	19,382		

Table 2. Rural Population (1961-1999)

YEAR	1000	YEAR	1000
1961	8,386	1981	11,537
1962	8,554	1982	11,658
1963	8,724	1983	11,774
1964	8,898	1984	11,884
1965	9,077	1985	11,986
1966	9,265	1986	12,089
1967	9,458	1987	12,185
1968	9,652	1988	12,269
1969	9,841	1989	12,338
1970	10,024	1990	12,389
1971	10,189	1991	12,433
1972	10,347	1992	12,460
1973	10,496	1993	12,476
1974	10,640	1994	12,489
1975	10,779	1995	12,503
1976	10,915	1996	12,542
1977	11,045	1997	12,581
1978	11,171	1998	12,619
1979	11,293	1999	12,649
1980	11,413		

Table 3. Urban Population (1961-1999)

YEAR	1000	YEAR	1000
1961	3,562	1981	8,285
1962	3,721	1982	8,613
1963	3,887	1983	8,952
1964	4,062	1984	9,302
1965	4,246	1985	9,662
1966	4,438	1986	10,024
1967	4,639	1987	10,395
1968	4,849	1988	10,775
1969	5,065	1989	11,158
1970	5,286	1990	11,542
1971	5,521	1991	11,913
1972	5,761	1992	12,285
1973	6,008	1993	12,661
1974	6,263	1994	13,052
1975	6,526	1995	13,463
1976	6,795	1996	13,875
1977	7,073	1997	14,308
1978	7,360	1998	14,758
1979	7,659	1999	15,218
1980	7,969		

Table 4. Agricultural Population (1961-1999)

YEAR	1000	YEAR	1000
1961	8,619	1981	11,054
1962	8,753	1982	11,056
1963	8,889	1983	11,057
1964	9,030	1984	11,054
1965	9,176	1985	11,048
1966	9,329	1986	11,038
1967	9,487	1987	11,024
1968	9,646	1988	11,004
1969	9,802	1989	10,974
1970	9,952	1990	10,933
1971	10,079	1991	10,891
1972	10,199	1992	10,839
1973	10,314	1993	10,781
1974	10,426	1994	10,726
1975	10,535	1995	10,678
1976	10,641	1996	10,637
1977	10,744	1997	10,602
1978	10,846	1998	10,570
1979	10,948	1999	10,535
1980	11,050		

Table 5. Non-Agricultural Population (1961-1999)

YEAR	1000	YEAR	1000
1961	3,329	1981	8,769
1962	3,522	1982	9,215
1963	3,722	1983	9,669
1964	3,930	1984	10,131
1965	4,147	1985	10,600
1966	4,374	1986	11,075
1967	4,610	1987	11,556
1968	4,854	1988	12,040
1969	5,104	1989	12,522
1970	5,358	1990	12,999
1971	5,632	1991	13,456
1972	5,909	1992	13,906
1973	6,190	1993	14,356
1974	6,477	1994	14,814
1975	6,770	1995	15,288
1976	7,069	1996	15,779
1977	7,374	1997	16,287
1978	7,685	1998	16,807
1979	8,004	1999	17,332
1980	8,332		

Table 6. Comparative Agricultural Populations in North Africa (1960-2000)

YEAR	MOROCCO	ALGERIA	TUNISIA	EGYPT
1960	63	67	57	58
1970	57	61	50	54
1974	55	57	46	53
1980	52	25	34	50
1985				
1990	36	24	24	41
1995				
2000	28	19	16	36

6.8 APPENDIX VIII Irrigation

Table 1. Area under Irrigation (1961-1999)

YEAR	1000 HA	YEAR	1000 HA
1961	875	1981	1,223
1962	880	1982	1,230
1963	885	1983	1,234
1964	890	1984	1,240
1965	895	1985	1,245
1966	900	1986	1,250
1967	905	1987	1,255
1968	910	1988	1,260
1969	915	1989	1,258
1970	920	1990	1,258
1971	950	1991	1,258
1972	976	1992	1,258
1973	1,005	1993	1,258
1974	1,032	1994	1,258
1975	1,060	1995	1,258
1976	1,090	1996	1,258
1977	1,124	1997	1,251
1978	1,155	1998	1,291
1979	1,185	1999	1,305
1980	1,217		

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