



**UNIVERSIDAD
DE GRANADA**

Facultad de Ciencias Económicas y Empresariales
Departamento de Teoría e Historia Económica

FUNDAMENTAL OBSTACLES TO MODERNIZATION IN PRECOLONIAL MOROCCO: GEOGRAPHY, INSTITUTIONS AND CULTURE

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Doctoral Thesis submitted by:

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in partial fulfillment of the requirements for the degree of
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*To the memory of my grandfather Abdelqader (1905-2001) whose life and struggle—
from a peasant in the Chaouia to an urban proletariat in Port-Lyautey—sparked my
interest in the economic history of Morocco*

Acknowledgments

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Thanks to all
Gracias a todos
Merci à tous
شكرا للجميع

Summary

This thesis develops on previous work on Moroccan economic history as it attempts to analyze the fundamental causes of Morocco's precolonial stagnation. For this purpose, I examine the various modernization programs attempted by Moroccan sultans in the second half of the 19th century. Two particular questions guide my research: 1) Has the failure to modernize resulted from the colonial pressures exercised by European powers to weaken the country? 2) Has the failure of modernization been the result of endogenous factors that pertain to Morocco's geography, institutions and culture? The analysis identifies five central factors that stood in the way of modernization:

- demographic inferiority as a result of recurring famines and epidemics
- the predatory nature of the central government
- the complacency of the religious establishment and its reactionary attitude toward Western-inspired modernization
- the tribal structure of rural society
- the harsh war indemnities imposed by Spain and the system of consular protection which weakened public finances and exacerbated the tax burden on peasants leading to rural rebellions

The five factors serve as a guiding map in constructing Morocco's precolonial economic stagnation. They help narrow and organize a broad spectrum of issues in the inquiry. Furthermore, I use the five factors to turn the analysis of failed modernization into a dynamic approach rather than an abstract a-historical discussion.

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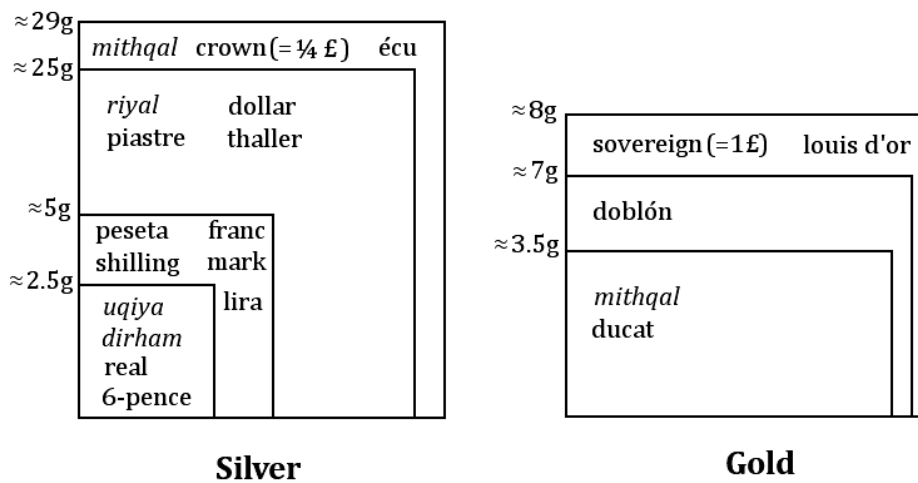
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Note on Money

As I shall explain in chapter 5, Morocco's precolonial monetary system was chaotic to say the least. A variety of European coins circulated along domestic monies of varying names.

For simplicity purpose and to avoid confusion, I only used the names of three Moroccan silver currencies: the *dirham* and the *riyal* as well as the gold *mithqal*. The fact that prior to the 1870s, coins maintained their intrinsic value enables us to compare international currencies according to their weight and metal content. The following diagram lays down the weight of Morocco's precolonial currencies as well as those of other countries.



Note on Translations and Transliteration

This thesis draws on sources originally written in Arabic, French and English, or previously translated to one of these languages. All translations from Arabic and French to English are my own and I strived to translate as accurately as possible and convey the nuances and subtleties of the original text, without any omissions, additions or changes of meaning.

As for transliterations from Arabic (ar.) and Berber (br.), I used the most common appellations for personal, object and geographic names. For other words, I adopted the following transliteration of “unorthodox” Arabic letters:

ح : we use the letter h underlined (h) as in **habous** حبوس

خ : we use (*kh*) as in **Makhzen** مخزن

ع : we use the apostrophe (') as in **'ulama** علماء

غ : we use the letters (*gh*) as in **ghrama** غرامة

ق : we use the letter (*q*) as in **qaid** قايد

ء : or “glottal stop”, we use the dot-less question mark (?) as in **waba?** وباء

ث : we use the letters (*th*) as in **mithqal** مثقال

ذ : we use the letter d underlined (d) as in **dra** ذرة

ص : we use the letter s underlined (s) as in **aqsaa** أقصى

ض : we use the letters (*dh*) as in **dhayf** ضيف

ط : we use the letters (*tt*) as in **khettara** خطارة

Introduction

When French painter Eugène Delacroix visited Morocco in 1832, he found a land that reminded him more of antiquity than the rapidly industrializing society he left in France. ‘This people is wholly antique’ he wrote in Tangiers; ‘Rome is no longer in Rome [...] The Romans and Greeks are here at my door, and I know them face-on’. Morocco, ‘the land of lions and leathers’, profoundly changed Delacroix and his art but would hardly change for the next 80 years.

When French forces advanced through Morocco’s heartland in 1911, they encountered a poor agrarian country with medieval infrastructures. With its fertile Atlantic Plains and proximity to Europe, one would expect more from precolonial Morocco especially that it lacked neither a craftsmanship tradition nor merchant entrepreneurs willing to take risk. Moreover and in the aftermath of the French conquest of Algeria, successive Moroccan sultans undertook a number of modernization measures aimed at saving the country from the fate that befell its eastern neighbor. Why Morocco failed to develop in the 19th century despite these modernization attempts is the question this thesis will attempt to answer.

The first chapter of the thesis provides a brief outline of Morocco’s geography, both physical and climatic, to help the reader understand the natural imperatives that had long constrained the country’s economy, especially its agriculture. Chapter 2 is an overview of the broad lines of Morocco’s history stretching from antiquity to the dawn of the 20th century. The third chapter reviews the literature relevant to Morocco’s economic sclerosis during the precolonial period; the works of authors, historians and economic historians are surveyed and I explain how this thesis would fill a void in the literature. The fourth chapter reviews the various theories on the obstacles to economic growth, with a focus on preindustrial societies. Chapter 5 provides a general sketch of economic life in precolonial Morocco, especially in the rural parts where the majority of the population lived, but also the consequences of European commercial penetration in the second half of the 19th century. In addition, the chapter covers the country’s domestic and external trade, its fiscal and monetary systems, as well as foreign investment.

The core of the thesis are chapters 6, 7 and 8 where I attempt to identify the root causes of Morocco's precolonial stagnation and the obstacles that stood in the way of its modernization, all backed with contemporary accounts of European travelers and diplomats as well as those of learned Moroccans. Chapter 6 explores the role of geographic factors, particularly demographic crises and the channels through which they hindered economic growth and prevented the adequate exploitation of the country's natural endowments. Chapter 7 turns to the role of institutions in inhibiting growth and their resilience to change. The role of culture in shaping economic choices and arrangements is discussed in chapter 8 and caution is exercised not to reiterate the arguments made by proponents of colonialism in the 19th and early 20th centuries. Finally, a conclusion draws the lessons learned from the study and highlights the impact of each of the three obstacles and how they interacted to produce the precolonial stagnation.

Due to the lack of reliable data on both economic and social variables, this thesis had to overwhelmingly rely on the qualitative descriptions provided by European travelers and consular reports on Morocco in the 19th and early 20th centuries. Thus, the research methodology adopted in this thesis is the dialectical method otherwise known as qualitative descriptive methodology which draws on documentary evidences while limiting the reliance on quantitative data.

Chapter 1: Morocco's Natural Environment

Located in the northwestern corner of Africa, Morocco is a geographically diverse country thanks to its long coast and imposing mountains. While the Rif Mountains dominate the Mediterranean coast, the Atlas Mountains cut the country laterally from the southwest to the northeast and separate the fertile Atlantic Plains from the arid Sahara desert.

With their soils¹ of varying fertility, the Atlantic Plains are Morocco's heartland and host most of its urban centers. They stretch over 600 km along the Atlantic coast and enjoy a mild Mediterranean climate that becomes extreme in the interior. Rainfall is abundant in the north and regresses gradually toward the south, but inter-annual variations are staggering² and have had a pervasive influence on agricultural choice and peasant lifestyle. Equally important to inter-annual variations in rainfall is its distribution within the year: its irregularity can mean long periods of drought, even during the wet season which stretches from October to March. Other whims of nature include flood-causing torrential rain³, the eastern hot and dry wind known as *chergui*, frost (*jriha*) that could damage crops if it occurs in spring, and perennial locust (*jraad*) that travel in swarms of several billion insects capable of devouring the vegetation of an entire region within hours then moving to the next.

The western Rif and Middle Atlas are the wettest regions in Morocco, receiving well over 800 mm of rain as well as significant snowfalls in winter; farming is constrained by harsh winter temperatures and low soil fertility. Nevertheless, a dense forest cover provides plenty of natural fodder to support extensive sheep and goat herding. The eastern side of the Rif is less watered than the western part, but river valleys such as the Nekkour and Kert have long supported densely populated villages of settled peasants. With its countless river valleys and moderate climate, the High Atlas provides more potential for farming especially on its northern flank. Despite its elevation, the High Atlas is dotted with passes (*tizi*) through which people and merchandise travel in and out of the Sahara. Strategic passes such as Tizi n'Tichka, Tizi n'Test and Tizi n'Talghomt represented an economic resource to the adjacent villages and their control was of paramount importance to Moroccan dynasties seeking to reap profits from the trans-Saharan trade. The Anti Atlas is the least endowed of mountain ranges due to its aridity and Precambrian rock formation; yet it

had been surprisingly populated by sedentary peasants who painstakingly improved the best exposed slopes to grow barley, almonds, and saffron. But most importantly, the Anti Atlas has long been known for its mines of copper, tin and silver as well as saltpeter which is an essential ingredient in gunpowder making.

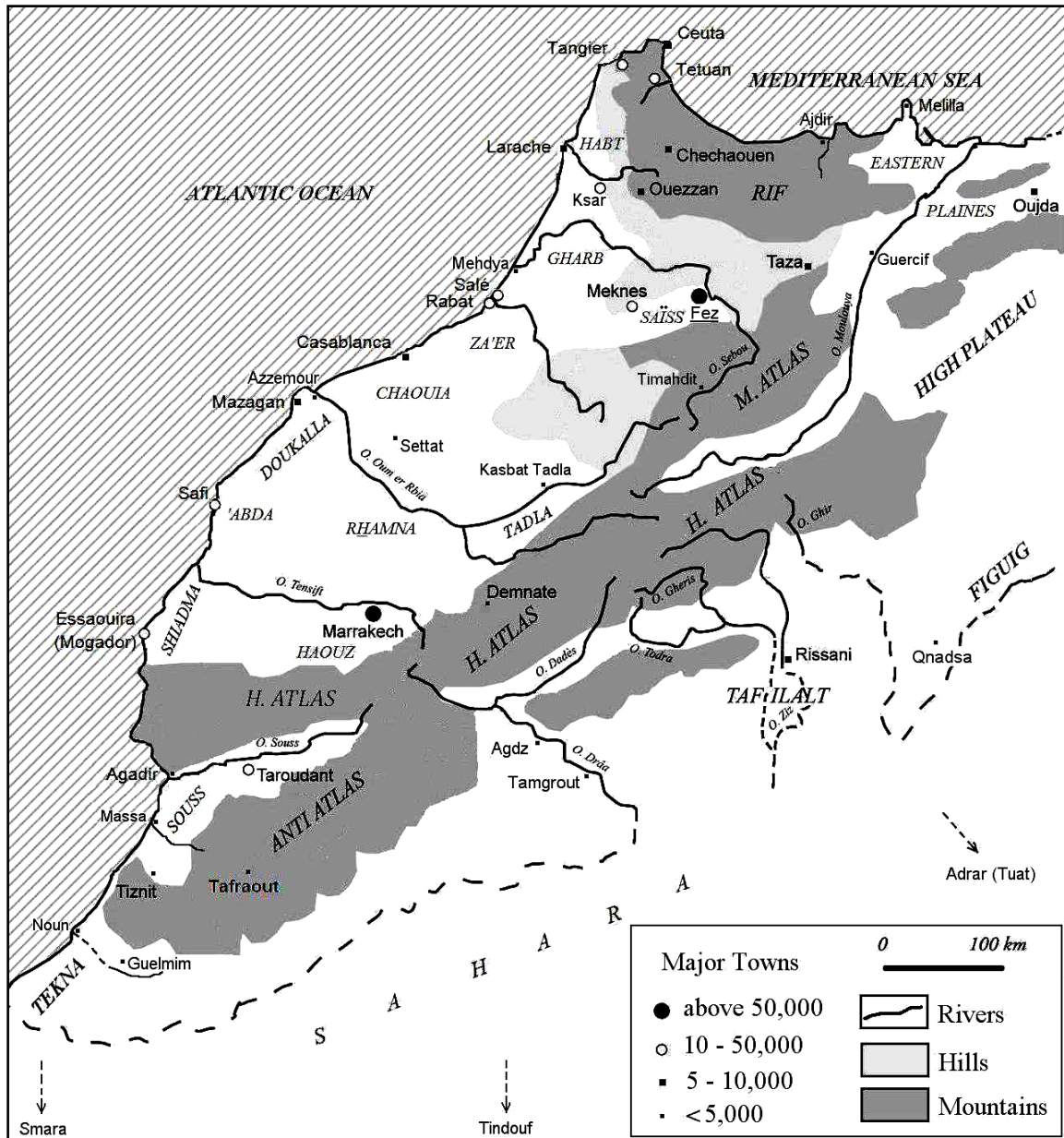
Feeding from the Rif and Atlas' melting snow and abundant rainfall, a number of permanent rivers flow through the Atlantic Plains and had long been exploited for irrigation and fishing while their estuaries served as harbors. The most important of these rivers are the Loukkos, Sebou, Bouregreg, Oum er-Rbia, and Tensift. Although all of these rivers are navigable in their lower courses, their mouth is often obstructed by a sandbar which renders them impassable for large boats. The Sebou is the only river potentially navigable for a significant distance into the interior. Freshwater swamps (*merja*) were a common feature of the northern Atlantic Plains but most were drained in the 1930s by the French colonial authorities; some swamps such as Ras-Dawra were substantial in size reaching 40 km in length. The Atlantic Plains are also crossed by innumerable seasonal streams that provide a supplementary source of water especially for livestock; their unpredictable flow however had made them inconsequential for the development of irrigated agriculture.

To the east of the Atlantic Plains and across the Rif Mountains lay the fertile Eastern Plains; their semi-aridity is compensated by their rich red soils and the flow of the Moulouya River as well as their proximity to the Mediterranean. The High Plateau dominates the rest of eastern Morocco and extends to neighboring Algeria; its aridity, poor soils and extreme temperatures—both in summer and winter—prevent any form of farming, but its prairies of wormwood are a boon for nomadic sheep herders.

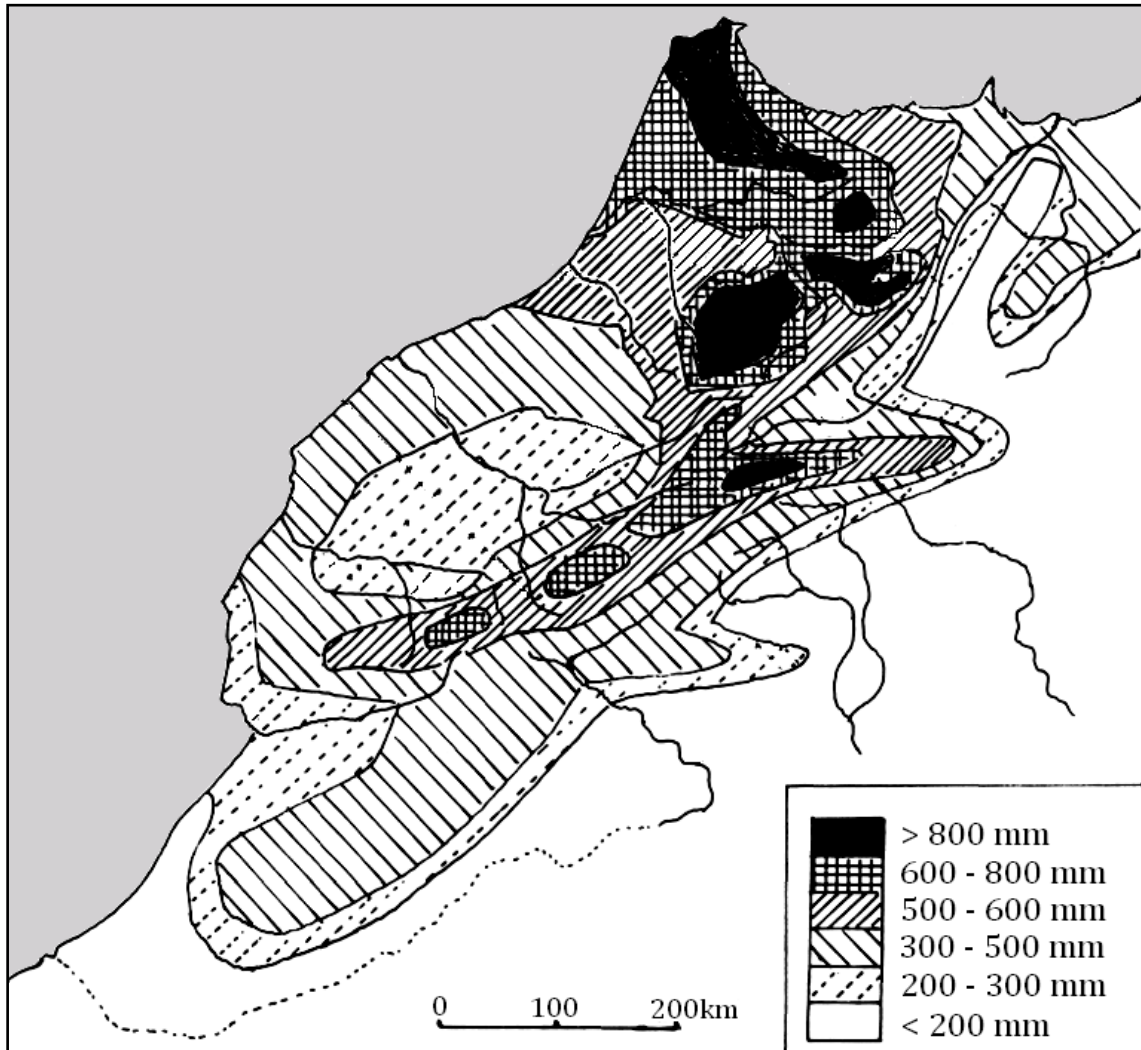
Further south on the Atlantic coast the Souss plain is carved between the High and Anti Atlas; with less than 250 mm in rainfall, farming is a gamble except in the irrigated perimeters of the modest Souss and Massa rivers. South of the Atlas Mountains reigns the Sahara desert; its scorching temperatures and severe aridity restrict farming to scattered oases and along the rivers that flow south of the mountains and form remarkable valleys that the hand of men transformed into splendid gardens of date palms, orange trees, and double harvests. Nevertheless, the northern edges of the Sahara receive enough rain to sustain steppe vegetation such as alfalfa and wormwood, dotted with acacia and jujube trees, making them suitable for camel herding.

Up until the 20th century, Morocco enjoyed a rich forest cover and was described by European travelers as the woodiest country in North Africa⁴. Cork oak is dominant in the Atlantic Plains north of the Oum er-Rbia and its acorns were a prized food during famines. With its 250,000 hectares, the Ma'mora forest north of Salé was the largest body of continuous forest in North Africa, and since the early dynasties it supplied wood to the shipyards on the Bouregreg and Sebou estuaries. The less imposing Holm oak is found mostly in the Rif and Middle Atlas where sheep and goats feed on its evergreen leaves during the snowy season. North Africa's largest tree and finest wood is the Atlas cedar which thrives in the central Rif and the Middle Atlas where some specimens exceed 40 meters in height and 7 in circumference. Cedar wood is resistant and scented which made it a favorite among the traditional wood craftsmen of Fez and Tetuan. Other important tree covers are pine, cypress, juniper, and fir. But none of Morocco's forests mattered to peasant subsistence as much as the Argan, a shrubby and drought-resistant tree endemic to the arid environment of the Souss, western High Atlas and Anti Atlas. Argan's importance stems from the edible oil extracted from its nuts through an arduous process performed by women; the oil was a valuable nutritive source providing calories to a peasant population living at the survival threshold.

Morocco's fauna is typical of the Mediterranean region but has regressed substantially since the introduction of modern firearms. Wild boars, gazelles, Barbary sheep and stags were the largest game animals, while predators such as lions, leopards and hyenas posed a threat to rural settlements⁵ and preyed on their livestock. In many regions, small game animals such as hare, bustard and partridge provided a supplementary source of protein to peasants.



Map 1: Morocco's physical features and precolonial cities



Map 2: Average rainfall

Region	City	L	E	R	m	M
Northern Peninsula	Tangiers	35.8	75	887	10	27
	Tetuan	35.5	88	686	7	30
Coastal Atlantic Plains	Larache	35.2	40	664	6	30
	Casablanca	33.6	50	406	7	27
	Safi	32.3	15	327	9	30
	Essaouira	31.5	5	287	10	22
Interior Atlantic Plains	Fez	34.0	415	545	4	36
	Settat	33.0	363	372	4	32
	Kasbat Tadla	32.6	495	409	4	40
	Marrakech	31.6	470	242	5	38
Souss	Taroudant	30.5	240	226	7	32
	Agadir	30.4	50	250	7	27
Eastern Plain	Oujda	34.8	460	342	4	33
High Plateau	Debdou	34	990	272	1	31
Rif	Chefchaouen	35.2	630	880	4	32
	Ajdir	35.2	60	270	8	30
Middle Atlas	Timahdit	33.2	1,812	695	-4	31
High Atlas	Demnate	31.7	968	590	1	36
Anti Atlas	Tafraout	29.7	1,000	235	2	31
Pre-Sahara	Guelmim	29.0	300	116	7	35
	Rissani	31.3	762	111	9	30

L: latitude (°north); **E:** average elevation (m); **R:** average annual rainfall (mm);
m: average low temperature in January (°C); **M:** average high temperature in July (°C)

Table 1: Climate of major geographic regions in Morocco

Region	River	S	L	D
Atlantic Plains	Sebou	Fez, Mehdyia	600	137
	Oum er-Rbia	Kasbat Tadla, Azzemour	550	117
	Loukoss	Ksar el-Kebir, Larache	150	38
	Tensift	Marrakesh	250	24
	Bouregreg	Rabat, Salé	240	21
Mediterranean	Moulouya	Guercif	520	50
	Martil	Tetuan	40	19
	Laou	Chefchaouen	60	13
	Nekkor	Ajdir	60	9
Pre-Sahara	Draa	Agdz, Tamgrout	350*	14
	Ziz	Rissani (Sijilmassa)	200	5
Souss	Souss	Taroudant, Agadir	220	13
	Massa	Illigh, Massa	120	4

S: nearby settlements; **L:** length (km); **D:** average annual discharge (m³/s)

(*) Although Draa's riverbed is over 1,000 km long, it is dry most of the year past Mhamid.

Table 2: Major rivers

Chapter 2: A Brief History of Morocco

The land coinciding roughly with present-day Morocco entered recorded history with the arrival of Phoenician traders in the 12th century BC. They established trading posts along the Atlantic coast and up the major rivers to trade with the Berbers, the country's indigenous people. By the 5th century BC, Carthage developed commercial relations with the Berber tribes of the interior and paid them an annual tribute to ensure their cooperation in the exploitation of raw materials. The 4th century BC saw the birth of the first political organization in the country: The Kingdom of Mauretania. A confederation of Berber tribes modeled after Carthage, it controlled the north of Morocco and the west of present-day Algeria. The south of Morocco remained relatively isolated from Mediterranean influences, although starting in the 4th century BC Jews from Palestine began settling in the Draa valley as well as in the Anti Atlas.

The fall of Carthage in the 2nd century BC brought Roman domination, and Mauretania became a client kingdom that supplied the Empire with commodities such as grain, olive oil, purple dyes, and valuable woods as well as wild animals. In 40 AD, Emperor Caligula assassinated the last Mauretanian king Ptolemy and Mauretania was annexed by the Roman Empire and split into two provinces, with Mauretania Tingitana as the north of present-day Morocco. Roman occupation was never complete as it were in Africa (present-day Tunisia) and independent Berber tribes such as the Baqates and Mauris constantly threatened Roman-controlled areas. Nevertheless, cities such Volubilis, Sala Colonia, Lixus, and Tingis prospered and gradually became Romanized. Starting in the 4th century, Christianity spread among the indigenous Berbers first in the cities and later in the unsubdued parts of the country, but never to the extent it did in Africa. The fall of Rome in 410 brought devastation as the Vandals swept through the country from Hispania on their way to Carthage; Vandal presence was short-lived and small Berber kingdoms soon controlled the area until it fell to the Byzantine Emperor Justinian I in 588. Byzantine rule however was limited to defendable small landholdings and never reached the extent and prosperity of the old Roman Empire.

Inspired by their new religion, Arab armies under Umayyad rule reached present-day Morocco in 682, but Berber resistance was fierce and Arab rule was

never consolidated as it did elsewhere in North Africa. Although some Berbers accepted Islam and even fought along Arabs, many remained hostile to Umayyad rulers who often mistreated them although the core message of Islam preached equality among believers. In the 8th century, newly-Islamized Berbers inflicted two humiliating defeats to Umayyad armies to permanently break their hold over.

As the "Far West" (*al-maghrib al-aqṣaa*) of the Islamic world, Morocco was a haven for many dissidents, rebels and refugees from the Middle East as they found an audience among the native Berbers. One of these refugees was Idris Ibn Abdallah, a descendant of Prophet Mohammed. In 788, Idris was proclaimed *imam* (leader) by the Awraba tribe in central Morocco. He founded the city of Fez and established the nucleus of a small state that would become the first in a series of independent dynasties ruling Morocco to this day. Chief among these dynasties were the Almoravids and the Almohads; of Berber origins and driven by a religious zeal, they unified Morocco and expanded their authority beyond its borders. At their zenith in 1159, the Almohads controlled from their capital city Marrakesh an empire stretching from Badagoz in al-Andalus to Tripoli in present-day Libya.

Up until the 12th century, most of the inhabitants of present-day Morocco were Berbers who spoke several Tamazight dialects, while Arab presence was limited to the urban centers. In 1160, the Almohads brought from Tunisia two Bedouin tribes that would have a significant demographic, linguistic, and economic impact on Morocco and the rest of the Maghreb. Originally from the Arabian Peninsula, the Banu Hilal and Banu Sulaym were nomadic tribes who swept across Egypt and the Libyan Desert to reach Tunisia, where they sacked cities and turned farmland into pasture. Morocco suffered the least from the Hilalian exodus as they were settled in the depopulated fertile Atlantic Plains in exchange of military service. The Banu Hilal and Banu Sulaym played an important role in the gradual arabization of Morocco's plains, while the mountainous regions remained, to this day, Berber.

The Almohad imperial achievement created the largest common market in the Mediterranean Basin and they engaged in commercial treaties with European city-states, especially Genoa whose merchants were guaranteed mobility and security throughout the empire. From their naval base in Ceuta, the Almohads commanded a substantial fleet of galleys to control the Strait of Gibraltar and protect their possessions from Pisan pirates as well as the rising navies of the Catalan-Aragonese, the Genoese and the Sicilian Normans. Maintaining such a vast empire was costly, but the Almohads had plenty of resources to support it. They invested in irrigation and

introduced new crops such as cotton and sugar cane while their efficient bureaucracy made sure taxes were collected. The trans-Saharan trade was crucial as a source of gold and luxury items that were traded across the Mediterranean along with copper and other minerals from the Atlas Mountains. Fez and Marrakesh became major centers of crafts and learning as they attracted the most skilled artisans and scholars such as Abentofail, Averroes and Maimonides.

Internal divisions and costly wars against the Christian armies in the Iberian Peninsula brought the collapse and disintegration of the Almohad Empire. In 1212, the Castilians and their allies under Alfonso VIII inflicted a decisive defeat to the Almohads at Las Navas de Tolosa. Cordoba, Sevilla and Valencia—the largest cities of al-Andalus—surrendered to the advancing Christian armies, while Tunisia and Algeria seceded from Almohad rule.

The Merinids, another Berber dynasty, emerged in the early 13th century as a powerful political and military challenge to the Almohads in Morocco. Although not a religious movement, the Merinids were able to mobilize a tribal alliance to win several battles against the Almohads culminating in the conquest of Marrakesh in 1269, but their Andalusian aspirations were short-lived as they tumbled at the Battle of Rio Salado in 1340. The city of Fez prospered during their reign and received thousands of Andalusian refugees fleeing the Reconquista; the Tunisian-born historian Ibn Khaldun (1332-1406) described it as the largest and most prosperous city in the Maghreb. But the succession of plagues in the second half of the 14th century brought devastation to the region and the country gradually fell to chaos.

Emboldened by their successes against the remaining Muslim strongholds in the Iberian Peninsula, the Castilians and Portuguese took their offensive on to Moroccan territory. In 1399, Castilians troops destroyed Tetuan and in 1415 the Portuguese took Ceuta, which to this day has not returned to Moroccan sovereignty. More coastal towns subsequently fell to the Iberians, and by 1515 the Portuguese controlled the entire Atlantic coast, exploited its peasants and monopolized its maritime trade. In the face of the Iberian occupation, Morocco saw the emergence of a number of *zawiyas*: religious entities that would play an important role in the country's political life. Initially organized as *sufi* brotherhoods, the *zawiyas* lifted the banner of *jihad* against the Christian invaders and achieved many successes. But the biggest blow to the Portuguese presence came at the hand of a new dynasty: the Sa'dis.

From their bases in the Draa and Souss, the Sa'dis rose to prominence thanks to their military feats against Portuguese presence along the southern Atlantic coast.

Their organizational ability and use of religious imagery to emphasize their “sharifian” lineage from Prophet Mohammed enabled them to expand their territory north and eventually unify the country. Once in power, Sa’di sultans hired Ottoman mercenaries, Andalusian refugees and European renegades to serve in their army and train soldiers in military techniques and artillery. They successfully ousted the Portuguese from Agadir, Azzemour, Safi and Arzila; at the Battle of Alcazar in 1578 the Sa’di decimated the cream of Portuguese nobility and the young King Sebastião causing a succession crisis and the temporary union with neighboring Spain.

The victorious sultan Ahmed brought stability and a short-lived prosperity to the country. He engaged in a trade treaty with Queen Elizabeth who established the Barbary Company as an exclusive monopoly over Anglo-Moroccan trade. Morocco’s main exports at the time were animal hides and sugar, which had become a considerable industry in the Haouz of Marrakesh and the Souss, while imports consisted primarily of European arms. Sultan Ahmed’s authority was so unchallenged in Morocco that he extended his empire south to present-day Mali where his army of Spanish mercenaries conquered and looted the rich Songhai Empire. With Ahmed’s death in 1603, Morocco fell again into the cycle of civil war, famine and plague that only ended with the arrival in 1666 of a new dynasty: The Alawis.

In 1610 and amidst the chaos, thousands of Moriscos found refuge in Morocco as they were expelled by the Spanish Inquisition. A group of these Moriscos named Hornachos settled in Salé, a port town at the mouth of the Bouregreg river. They gained notoriety as they preyed on Spain’s transatlantic ships and plundered its coastline. By the late 1620s, the Salé Corsairs grew stronger and bolder and expanded their range of activity to include all European ships and coastlines.

Sultan al-Rashid unified the country in 1669, but it was his half-brother Ismail who consolidated the power of a new administrative system: the Makhzen¹. For 55 years, sultan Ismail ruled with an iron fist from his new capital Meknes and left a controversial legacy. He created the Bukhara: an elite military corps made of 150,000 freed black slaves, which he used effectively to collect taxes and liberate many Iberian outposts on the Moroccan coast. He guarded Moroccan independence from an expanding Ottoman Empire in its Algerian bases. He encouraged piracy and used the captured Europeans as a bargaining tool in his negotiations with the European powers. Ismail is also remembered for his paranoid suspiciousness and cruel persecution of those in his circle, including his innumerable sons.

The death of sultan Ismail in 1727 plunged the country in another circle of violence that ended with the accession of Mohammed III (1757-1790), one of Ismail's grandsons. He pacified the country, dismantled the Bukhara army, and curbed the increasingly cumbersome Salé Corsairs. Sultan Mohammed understood that Europeans had become too powerful to fight and he sought peace with the major powers in exchange of tribute payment. He signed commercial treaties with Denmark, Sweden, England, Venice, France and even Spain, as well as the newly founded United States of America. With the dissolution of the Bukhara army, Mohammed III increasingly relied on international trade for raising revenue and for that purpose he built the new port city of Essaouira to handle all maritime trade in southern Morocco. By 1780, Essaouira became Morocco's primary port and was home to 12 European merchant houses and over 1,000 European residents. Jews flourished in the city as many of them became mercantile agents of the sultan conducting trade on his behalf.

Mohammed III can be regarded as Morocco's last great sultan. During his reign, Morocco enjoyed complete independence from European mingling, but this would change in the post-Napoleonic world of rapidly industrializing powers competing for mercantile privileges in Africa, the Middles East and Asia. After the brief yet bloody reign of sultan Yazid, the religiously devout sultan Sliman (1792-1822) attempted to consolidate the political gains achieved by his father Mohammed III and curb the power of the *zawiyas*. The French expedition in Egypt made sultan Sliman wary of European intentions and decided to ban maritime trade and prohibited Moroccans from travelling to Europe; he also halted piracy to avoid provoking a European bombardment as was the fate of Algiers in 1784.

The 19th century witnessed a succession of weak sultans who attempted to fend off European intervention but with little success. The French conquest of Algiers in 1830 confirmed the worst fears of sultan Abderrahman (1822-1859); he tried to avoid confrontation with the French, but skirmishes between Moroccan *mujahedeen* and French forces along the border led to a full scale battle in 1844. The poorly equipped and badly trained Moroccan army was routed at Isly by a much smaller French force; Abderrahman had no choice but to sue for peace and assume its consequences. A peace treaty was signed in Lalla Maghnia by which Morocco recognized French control of Algeria and agreed to a land border.

Reforms became a pressing necessity after the humiliating defeat. The sultan established a new professional army and military equipment as well as trainers were brought from Europe, but it also failed to repel the Spanish invasion of Tetuan in

1860. British intercession prevented the worst, but the Tetuan debacle proved to be more detrimental than Isly as it imposed a harsh indemnity of 100 million pesetas, half of which had to be paid upfront to secure the evacuation of the city. Left with no other choice, the Makhzen went into debt for the first time in its history. British and Spanish controllers were assigned to Moroccan ports to collect customs for repayment of the loan and the remainder of the indemnity.

The expansion of trade with the Europeans was another consequence of the Isly defeat. Commercial treaties were signed with Britain, France and Spain to reduce duties and abolish trade monopolies. British domination over Moroccan trade remained uncontested during the 19th century especially after tea consumption became popular among Moroccans in the 1870s. Overall, maritime trade benefitted a few, namely a merchant class with substantial capital, unscrupulous Makhzen officials and tribal notables. However, the bulk of Moroccan peasants remained poor while artisans in the cities were harmed by cheaper manufactures and rising grain prices. Dissatisfaction was amplified by the fact that a number of Moroccans who acted as agents of European merchants gained consular protection which exempted them from Moroccan taxes and laws.

As the European penetration and its consequences became increasingly obvious, popular discontent grew and often translated into protests. In many cases, Europeans were targeted and killed resulting in harsh military retaliations by their nation's navy and the imposition of financial indemnities, the payment of which drained the treasury and compelled the sultan to borrow from European banks.

Despite the financial difficulties, sultan Mohammed IV (1879-1894) and his successor Hassan I (1873-1894) attempted to modernize the country in the image of Egypt and Ottoman Turkey but their measures were too shy to produce any concrete results. However, both sultans succeeded in maintaining internal peace and preserving Morocco's fragile territorial integrity. The Madrid Conference in 1880 was an opportunity for Morocco to reassert its territorial independence and complain about the system of consular protection, but the European negotiators had no intention of loosening their grip on the country. The conference maintained the status quo but at the same time earning the Moroccan question an international status, especially with the entry of Germany in the colonial race.

After establishing its protectorate over Tunisia in 1882, France became increasingly interested in extending its North African dominion to Morocco. Its strategy of "peaceful penetration" consisted of two key policies: disengaging potential

competitors from their interest in Morocco through bilateral agreements, and entrapping the Makhzen in debt, which would make it seek financial assistance from France in exchange of further economic concessions. The strategy worked well initially and in 1904 France successfully obtained from Britain a free hand in Morocco in return of recognizing British control over Egypt. Meanwhile, sultan Abdelaziz (1894-1908) increasingly fell prey to European financial houses from which he borrowed heavily to offset the decline in tariff and tax revenues as well as to pay for his lavish lifestyle and costly campaigns to crush tribal rebellions. By 1905 the Makhzen was bankrupt, weak, and isolated: perfectly ripe for the colonial harvest, but Germany would not give up its interests in Morocco without a fight.

Kaiser Wilhelm II landed in Tangier in March 1905 to declare his support for Moroccan sovereignty and called for a conference to settle the Moroccan question. The Algeiras Conference was held in 1906 and gathered representatives of 12 European countries as well as the United States. The conference's final act promised to preserve Moroccan sovereignty and territorial integrity while placing the country's administration, customs, and finances under European management. The hopes given in Algeiras proved short-lived as the sultan's authority collapsed and Morocco slipped to anarchy.

Abdelaziz was ruled unfit by the country's religious establishment and his half-brother Abdelhafid was proclaimed sultan in 1908 on the condition to restore order and wage *jihad* on the French who already took Casablanca and Oujda, but he proved as helpless as his predecessor. When rebels from the Atlas Mountains besieged the sultan in Fez in 1911, France took it as a pretext to intervene and occupy the city. Spain asserted its "colonial rights" by occupying the northern Atlantic Plains, while German objection was muted in exchange of colonial territory on the Congo River. Sultan Abdelhafid signed the Treaty of Fez on 30 March 1912 establishing a French Protectorate over Morocco²; he later abdicated in favor of his half-brother Youssef.

Timeline of major events in the precolonial period

1830: French expeditionary force conquers Algiers.

1844: Moroccan defeat at the Battle of Isly.

1854: Surrender of Emir Abdelqader; France completes its conquest of Algeria.

1856: Anglo-Moroccan treaty of commerce.

1860: Occupation of Tetuan by Spain and the imposition of a heavy war indemnity.

1878-1882: Famine and plague kill around a third of the population.

1880: Madrid Conference maintains European privileges in Morocco.

1882: Morocco fully pays the 1860 loan; British custom collectors leave the country.

1894: Death of sultan Hassan; his 13-year son Abdelaziz designated as successor under the supervision of the powerful vizier Ba-Hmad.

1899: Death of Ba-Hmad, the young sultan assumes control but his reckless policies drive the country into more foreign debt.

1902: Morocco falls into anarchy: Jilali Ben-Driss (*Bouhmara*) leads a rebellion in the east, and Raisuli challenges the sultan's authority in the western Rif.

1906: Algeciras Conference; Germany unsuccessfully challenges French colonial intentions in Morocco.

1907: Chaouia tribes attack Casablanca killing seven French workers. French navy bombards the city in retaliation then occupy it.

1908: From Casablanca, French forces move inland to pacify the Chaouia; Oujda on the Algerian border is also occupied.

1908: Sultan Abdelaziz deposed and replaced by sultan Abdelhafid.

1911: Berber tribes besiege the sultan in Fez; France conquers the city.

1912: Signing of the joint French-Spanish Protectorate.



Figure 1: Sultan Abderrahman painted by Eugène Delacroix in 1832



Figure 2: Treaty of Wad Ras imposed on Morocco in 1860 after the Battle of Tetuan - painted by Joaquín Domínguez Bécquer

Chapter 3: Literature Review

Why Morocco failed to modernize its economy in the 19th century is the central question in the economic history of Morocco, yet it never received the attention it deserves. What has been written so far about the economic history of precolonial Morocco are mostly surveys that describe, and when possible quantify, the social and economic changes that the country witnessed as a result of European commercial penetration. Very few explore why these changes were too shy to release the country from the vicious cycle of subsistence agriculture and spare it from the humiliation of foreign colonization.

The conventional wisdom shared by many Moroccans states that the European penetration and the imposition of the “open door” policy damaged Morocco’s economic progress and kept it in a pre-capitalist stagnation that made it an easy prey for European Imperialism. Such claims, although there may be some truth in them, are not founded on careful and comprehensive analysis of the socioeconomic realities of precolonial Morocco. For example, the historian Mohammed al-Manouni (1985) presented Morocco’s decadence in the 19th century as a direct result of the crumbling of its maritime power at the hands of the much superior European navies, and the collapse of its traditional industries in the face of increased foreign competition.

The work of al-Manouni draws from conclusions made at the dawn of Morocco’s independence by Albert Ayache, a prominent Moroccan historian in his assessment of 44 years of French colonization. Ayache argued that Morocco’s precolonial economic stagnation was a continuation of four centuries of decadence, the roots of which are ‘multiple and complex’, but blamed ‘the preponderance of European navies which, starting in the 17th century, forbade Muslims from free navigation in the Mediterranean and the Atlantic’. Morocco’s maritime inferiority secluded it from the vast movements of the Renaissance and caused its people to withdraw into themselves and view Christians with suspicion and hatred (Ayache, 1956, pp. 37-38).

According to the same “conventional wisdom”, Moroccan sultans undertook a number of reforms to counter this decadence but these were intentionally stifled by European powers to further their colonial ambitions. For example, the Moroccan scholar Abbas Arhila (1995) wrote:

Among the factors that hindered reforms in Morocco are its two defeats: at the battle of Isly in 1844 and at the Tetuan war in 1860, as well as its fall under the rivalry of European countries, each penetrating commercially and seeking to grant its protection to Moroccans and gain advantages to its citizens and institutions.

Other authors were more realistic about the extent of reforms undertaken by sultan Mohammed and Hassan, but they still insist that they were the embryo for a more ambitious modernization program that could have led to a successful case of independent development. This was the opinion of Ali Yata (1966), a post-colonial leftist politician, who argued that Morocco was in the right course to modernize especially during the reign of sultan Hassan but the French Protectorate forced the Moroccan economy into the wider capitalist system to be a source of raw materials and a market for its manufactures. Hidelbert Isnard expresses a similar view in his study of the Maghreb:

There is no pretext of finding a justification for colonization by asserting that the Maghreb would not have been able to emerge on its own out of its stagnation. Several indications suggest that he was about to start his own efforts (Isnard, 1966, p. 50).

In his herculean work “Le Maroc et l’Europe” Jean-Louis Miège tracked the European penetration of precolonial Morocco and its socioeconomic manifestations. He dug deep in European official archives and diplomatic correspondences to extract valuable data about the volume and composition of imports and exports, commodity prices, tariff revenues, exchanges rates, the number of residing Europeans and their Moroccan “protégés”, as well as famines and their casualties. Miège’s chief conclusion is that the Anglo-Moroccan commercial treaty of 1856, which he qualified as Morocco’s Treaty of Nanking, and the subsequent opening of the country to foreign influence was one of the *‘éléments les plus actifs de la dissolution de l’ancien Maroc’* (vol. 2 p. 331) producing *‘une transformation capitale des espaces économiques marocains’* (vol. 2 p. 459) through *‘des forces nouvelles travaillent le pays’* (vol. 2 p. 547). Despite the fact that Morocco’s maritime trade was an insignificant part of British or French commercial enterprises, Miège argued that it was sufficient to generate the dynamism through which old structures crumbled. Miège also documented the attempts undertaken by Moroccan sultans to modernize the country’s economic structures, and blamed their failure on the Makhzen’s inexperience and lack of resolve as well as the greed of some Europeans ‘who had only seen in this program lucrative commercial operations’ (vol. 3 p. 131).

Miège's magnum opus is considered a reference work in the study of precolonial Moroccan history, but it is far from the economic analysis capable of answering our central question. The French historian Marcel Emerit (1965) who described "Le Maroc et l'Europe" as a work in diplomatic and commercial history eloquently wrote:

After reviewing this incomparable monument of scholarship, the reader would ask a question. Was the conquest of Morocco necessary to make it a modern country? Or could we have achieved [this end], more slowly of course, but with less blood and money, by helping it [Morocco], with more important military and civilian missions, operate its internal transformation? [...] Perhaps, in the following books, Mr. Miège would help us make a judgment.

Expanding on the work of earlier French students of Moroccan history, Nicolas Michel (1997) examines the social and economic realities of rural Moroccan society in the precolonial period. "Une Economie de Subsistances: Le Maroc Précolonial" is a detailed description of peasant life in precolonial Morocco and how it was shaped by the vagaries of the weather, and how it reacted to the country's instable political landscape. Contrary to Miège, Michel's fundamental thesis is that European commercial penetration was limited to the port cities and thus inconsequential to most Moroccans whose lives were characterized by scarcity, the struggle for subsistence, and vulnerability to droughts, locusts and epidemics. Nevertheless, Michel's work is highly descriptive of Morocco's precolonial economy and does not attempt a comprehensive analysis of the obstacles that inhibited its modernization.

In a more balanced perspective on the causes of Morocco's precolonial stagnation, the historian Abdallah Laroui (1970/2007) stressed the importance of both internal and external factors in explaining why the Maghreb region fell to European domination:

The traditional state in the Maghreb collapsed due to the combination of two factors: foreign pressure, both military and economic, and increasing internal weakness resulting from centuries of stagnation in a state of decadence. (p. 532)

To break free of this "state of decadence", Laroui explained that the region needed:

a strong army and readily available capital to finance an ambitious reform program. It is because of this deficiency that the whole Maghreb fell to foreign occupation. (p. 519)

However, raising such capital was an impossibility given the region's social structure:

The country lacked capital that could be mobilized in a short period. This makes evident the deficiency in the social structure: the absence of an aristocratic class, in its true sense, capable of managing and developing the productive apparatus [...] (p. 634)

Finally, Laroui eloquently summed-up the roots of stagnation in the Maghreb:

The region witnessed neither a true feudalism, that is to say a local leading class that teaches its followers order and discipline, nor the ascent of an urban middle class that conceives a “civil” culture with which it unifies all groups in society, nor a true absolute monarchy that exploits the rivalry between these two classes to build a just state that sponsors the rights of everyone and thereby earns their loyalty outwardly and inwardly. (p. 639)

In other words, Laroui ascribed Morocco’s precolonial stagnation to its socioeconomic formation—a Marxist concepts that refers to the totality of relations in a given society—and its failure to conceive the social elements capable of creating economic progress.

Another prominent scholar of Moroccan socioeconomic history is Paul Pascon whose “Haouz de Marrakech” is a reference work. He traced the interaction of sultans, tribes, powerful governors, and the *zawiyas* in shaping the economic history of Marrakesh and its region since the time of the Sa’dis to the postcolonial period. Paul Pascon cited the legacy of Moroccan sultans in importing European technologies and attempting, timidly though, to modernize production methods; he explained that ‘these efforts remained unsuccessful because of the inadequacy of the social structures to these imported technologies’ which led to the domination of the country’s external trade by European merchant houses (Pascon, 1977, p. 395).

In his published doctoral dissertation, Driss Ben Ali attempted to identify the socioeconomic formation of precolonial Morocco. He reached the conclusion that it was made of two modes of productions: an infant feudal mode dominating in the Atlantic Plains where intensive agriculture was possible, while an autarkic communal mode, based on the tribe, survived in the remote *Bled as-Siba* (land of dissidence) where the sultan’s authority was nominal. In the second part of his thesis, Ben Ali identifies the factors that blocked Morocco’s socioeconomic formation in its pre-capitalist mode of production. He mentioned, among other things, the rapid succession of famines and epidemics in the 18th and 19th centuries that caused *une régression démographique*, as well as the arbitrary expropriation of merchants’

wealth by the Makhzen which had prevented the emergence of an independent and politically-empowered urban bourgeoisie (Ben Ali, 1983).

Ben Ali's analysis of Morocco's precolonial socioeconomic formation and the factors that blocked it in the pre-capitalist stage contains some of the elements to answering our central question, but there are some inaccuracies that make it inconclusive. In my view, precolonial Morocco hardly fits the definition of feudalism as a form of society, or at least Marx's perception of the term. Firstly, the tribes were too important to characterize the whole social formation as feudal in any meaningful sense. Secondly, the Makhzen was too powerful and centralized to qualify as feudal, yet too weak to be Asiatic. Finally and most importantly, the quasi-absence of serfdom and hereditary nobility rules out the feudal mode of production from the socioeconomic formation of precolonial Morocco. David Seddon (1981, p. 35) explained that if a precolonial Moroccan socioeconomic formation exists, it requires 'a more sophisticated analysis to seize [its] complexities'. Among the critics of Ben Ali's analysis is Salehdine (2000, p. 77) who explained that his work relies exclusively on one category of land and ignored the other categories which represented the majority of agricultural land in precolonial Morocco.

Driss Ben Ali was not the first to bring about the role of demography in the stagnation of the precolonial economy. The works of Bernard Rosenberger are particularly informative in this regard; he cites '*l'inferiorité démographique*' resulting from recurring famines and epidemics as the primary cause of this '*retard économique*' and explains that population had not increased from the 16th to the 19th century and as a consequence the economy could not be stimulated (Rosenberger, 1977). Rosenberger explains that prior to that period, Morocco experienced virtuous episodes of population growth and political stability that translated into economic prosperity. The reign of the Sa'dis in the 16th century was the last of these episodes and Rosenberger describes it as a 'threshold to modernity' which Morocco missed due to the succession of famines and epidemics in the 17th century (Rosenberger, 2008). Edmund Burke III (1976, p. 9) pointed as well to the role of under-population in producing 'weak agrarian structures and a thinly settled population' that underused the potential of agriculturally-rich regions. This was also the opinion of Lucette Valensi (1969/2004, p. 38) who reminds her readers that '*l'homme, facteur de production et consommateur, reste rare*' in the precolonial Maghreb. The role of demography in economic growth is uncontested as we shall see in the next chapter, but neither Rosenberger nor Valensi puts it in an analytical framework along with other factors to determine the mechanism through which they inhibited modernization.

One would also add that the works of Laroui, Ben Ali and Seddon were framed according to the Marxist theory of historical materialism which has been rendered obsolete by the recent advancements in institutional economics. Institutional economic historians such as William N. Parker (1971) criticize the Marxist theory of historical materialism for trying to understand history as stages which are self-contained mechanism producing a certain class structure, a certain distribution of income and a certain standard of economic welfare and economic power. Others challenge the oversimplification explicit in Marx's theory that history is driven by class struggle between the holders of the means of production and those whose only resource is their physical labor. For example, Douglass North sees social conflict as transcending the struggle between economic classes, especially in pre-capitalist societies, and prefers the individual as the basic unit of analysis rather than class. Thus, North's emphasis on the struggle over the creation and distribution of surplus is a more encompassing framework for understanding inter-group struggle than the more narrow Marxist focus on class exploitation. Finally, the theory of historical materialism is culturally biased as it draws heavily on European history and ignores socioeconomic developments in Asia, Africa and the Middle East. Anthony Giddens (1981, p. 85) who described historical materialism as 'Europocentric' argues that Marx was no different than his contemporary writers in looking down on "Oriental" societies as barbarous and demonstrating a peculiar 'unchangeability'.

After this review of the literature, it is evident there has been no published study that fully and extensively investigate the root causes of Morocco's precolonial stagnation, taking into account geographic, institutional as well as cultural factors. This thesis will attempt to fill that void, but first it is imperative to explore the various theories on the obstacles to economic growth.

Chapter 4: Theoretical Review

The determination and establishment of the causes of economic growth has been the main concern of economic theory since Adam Smith. In his “Wealth of Nations”, Smith identified the driving forces of any growing economy as the division of labor and gains from trade resulting from market integrations for goods, capital, and labor. This market integration can be both within a country as well as through international trade, and would promote commerce and the accumulation of capital. Smith saw trade between town and country as ‘the great commerce of every civilized society’, and stressed the strategic importance of good transportation. In short, Adam Smith provided a clear route by which a pre-industrial economy could increase its wealth: regional specialization, good transportation, vigorous trade and an increasingly strong merchant class. Finally, Smith remarked that a nation’s ‘commerce and manufactures can seldom flourish long’ without sound institutions such as a justice system, private property rights, and the rule of law (Smith A., 1776/2003, p. 1157).

The nineteenth-century German Historical School brought a new approach to the study of economic history. The concept of growth-stages was an attempt to explain the rapid transformations that Western Europe was witnessing at that time and to prescribe remedies for the lagging German economy. Friedrich List identified five development stages and classified them based on shifts in occupational distribution: (1) the savage, (2) the pastoral, (3) the agricultural, (4) the agricultural-manufacturing, and finally (5) the agricultural-manufacturing-commercial (List, 1856, p. 74). List’s attention was focused on ‘a description of the conditions under which a mature agricultural stage can exist’ and how it ‘can be transformed into one on a higher level by the introduction of manufacturers’. He regarded manufacturing as the most dynamic element in the process of economic growth and believed that the state must create the necessary conditions for it to prosper. He suggested protectionism to promote domestic industries and shield them from strong competition from more advanced industrial nations.

Another “stage-approach” to economic growth is the concept of modes of production developed by Karl Marx in his theory of historical materialism. We have already introduced the concept, but it is worth noting here that Marx identified the ‘historic conditions for capital’ as (1) ‘free labor and the exchange of free labor against

money' through the abolition of all types of personal dependence such as slavery or serfdom, and (2) the separation of labor from land through 'the dissolution both of free petty landownership and of communal landed property'. Marx saw the realization of this second condition as the 'original sin' of capitalism and 'the basis of the whole process' (Marx, 1857/1965). Only when these two conditions were realized that European society moved from a feudal to a capitalist mode of production.

Walt Whitman Rostow (1960), a staunch opponent to communism and a believer in capitalism and free enterprise, developed the five-stage take-off model as an 'anti-communist manifesto'. Rostow's diagnosis of the 'preconditions to take-off' was in line with Smith's prescriptions: the gradual build-up of transport infrastructures and productivity gains in agriculture. However, Rostow explained that these technical preconditions require prior or concurrent transformations in the 'non-economic dimensions of the traditional society'. The most important of these are the willingness of the population to adapt to an ever-changing economic system that increasingly confines individuals to specialized and repetitive tasks, as well as the emergence and empowerment of a 'new élite' that would 'begin the building of a modern industrial society', which it judges to be 'ethically good or otherwise advantageous'. Finally, Rostow stressed the role of a capable national government that takes responsibility, at least partially, for establishing the technical preconditions for take-off.

Although the preconditions to take-off rose endogenously in Western Europe, Rostow argued that it must not be the case for other countries. As nineteenth-century Russia and Japan had shown, external intrusion by more advanced societies shocks the traditional society and unleashes the ideas and sentiments by which the modern society is conceived out of the old one. Ironically, precolonial Morocco presents a counter example to Rostow's argument. European penetration, both military and commercial, failed to unleash those 'reactive nationalist sentiments' that should have set Morocco on a path to take-off. To put it more accurately, there were strong reactive sentiments in precolonial Morocco, especially after the Tetuan defeat in 1860, but they never materialized into an ambitious modernization program as they did in Japan.

After this brief review of the literature on the preconditions of economic growth, one could simply conclude that precolonial Morocco was not capable to independently modernize its economic structures. Capital was scarce and there were no financial institutions to facilitate its mobilization and mobility. Labor was of limited quantity and quality. Agriculture was mostly rainfed and geared toward subsistence rather than commercialization. Transportation infrastructure was basic

and most merchandise was carried on pack animals. Crafts, although important in some cities, were organized in guilds that promoted tradition and stability over innovation and competition. Finally, the scientific approach to technology was virtually non-existent and the country's leading educational centers were training venues for the sultan's administration, forming judges and notaries rather than engineers and scientists.

The conclusion that precolonial Morocco lacked most of the necessary "preconditions to take-off" raises two pressing questions: why had not these preconditions arisen endogenously as they did in Western Europe? And why, in the face of eminent European conquest, the sultan's modernization attempts were too shy to produce concrete results?

To answer these questions we have to turn to recent strides in economic growth theory, which have distinguished between "proximate" and "fundamental" causes of growth. While capital accumulation and productivity growth are now recognized as proximate causes, there still is no consensus on what constitutes the fundamental determinants of economic growth. According to Bertil Ohlin, 'climate, language, cultural, and legal institutions' may be at the root of 'national differences in factor endowments, technology, and preferences' (Brems, 1986). Angus Maddison (1991) considered 'institutions, ideologies, pressure of social-economic interest groups, historical accidents and economic policy at the national level' as the ultimate causes of economic growth. Robert Hall and Charles Jones (1999) attributed the staggering differences in 'output per worker' between countries to differences in their institutions and government policies, while William Easterly and Ross Levine (2003) added geography to the list of culprits. For Deepak Lal (2001), differences in factor endowments (geography), culture and politics explain why the "West" triumphed over the "Rest". Overall, the contemporary literature lists about 60 different variables which could help determine 'the fundamental drivers of growth', but only three hypotheses have enjoyed widespread popularity: geography, institutions, and culture.

1. The geography hypothesis

The impact of geographic factors on prosperity has been obvious since prehistoric times: Humans built their first civilizations along fertile river valleys where climate is mild and plants are domesticable. Climatic factors were used by Plato, Aristotle, and Strabo to explain why the Greeks were more developed than the "Barbarians" from hotter and colder climates. Environmental determinism, the idea that the physical environment determines the patterns of human culture and societal development, rose to prominence in the late 19th and early 20th century, but was

deemed racist with the advent of the decolonization movement following the World War II. As a result, geographic factors were neglected as a relevant dimension in economic growth models (Sachs, 2000). Recently however, a number of studies have helped bring physical geography back into the study of economic development.

The literature identifies at least seven mechanisms by which geography affects economic development. First, climate may be an important determinant of work effort, incentives, or even productivity. This idea dates back at least to Machiavelli who thought that 'fertile countries are apt to making men idle and unable to exercise any virtue' (Machiavelli, 1519/2009). Karl Marx expressed a similar view when he wrote that 'where nature is too lavish [...] she does not impose upon him any necessity to develop himself' (Marx, 1867/1967, p. 513). The French philosopher Charles Montesquieu argued that in hotter climates 'the heat of the climate can be so excessive that the body there will be absolutely without strength [...] so prostration will pass even to the spirit; no curiosity, no noble enterprise, no generous sentiment; inclinations will all be passive there; laziness there will be happiness' (Montesquieu, 1748/1989, p. 234). An equally dubious argument was put forward by Ellsworth Huntington who contended that 'the climate of many countries seems to be one of the great reasons why idleness, dishonesty, immorality, stupidity, and weakness of will prevail' (Huntington, 1915, p. 294). In similar vein, GilFillan (1920) saw that human civilization followed a 'coldward course of progress'; he reasoned that early civilizations appeared in hot climates where agriculture was possible, but later, as technology assumed a more important role, leadership moved northwards where 'conditions for mental ability were better'. Contemporary writers on economic history such as David Landes refuse to accept the racial undertones of their predecessors, but still admit that in the heat and humidity of the tropics 'few manage to work at full capacity' (Landes, 1998, p. 15).

Second, geographic factors are the foremost determinant of agricultural productivity and growth, a precondition to broader growth (Bezemer & Headey, 2008). High agricultural productivity generates food surpluses to feed dense population settlements where increased specialization of the workforce is possible (Diamond, 1997, p. 284). Sachs (2000) argues that 'by the start of the era of modern economic growth, if not much earlier, temperate-zone technologies' such as the heavy plow, crop rotation, fertilizing, drainage, selective animal and crop-breeding 'were more productive than tropical-zone technologies'. This is due, among other things, to the fragility and low fertility of tropical soils, the high prevalence of crop pests and parasites, high evaporation, irregular rainfall, and unstable supply of water (Landes, 1998).

Third, aspects of natural geography can affect industrial development by establishing the 'seeds around which self-reinforcing agglomerations crystallize'. Krugman (1998) explains that geographic factors may dictate the initial location of a city, but once established a concentration of population tends to persist and grow even when 'those geographical advantages are no longer relevant in any direct sense'. This can divert substantial economic resources in terms of transportation costs which could be used more efficiently at a more "geographically advantageous" city. For example, Morocco's largest precolonial cities owed their location to a number of geographic aspects that were relevant at the time of their founding in the Middle Ages. Fez, the largest of all, had access to water both for drinking and to power mills, prime agricultural land, dense forests, and most importantly a strategic location at the crossroad between the Atlantic Plains and the east of the country. But in an age when maritime trade and industrialization were shaping the lives of people, Fez was at a disadvantage due to its remoteness from the ocean which made it unsuitable for retaining its historical role as the country's leading industrial center. Yet Moroccan sultans in the 19th century insisted on establishing, at considerable cost, modern factories in Fez while coastal cities such as Tangiers and Rabat would have been more suitable locations for these industrial experiments.

The "disease burden" is another mechanism by which geography affects prosperity. Malaria and other infectious diseases common in tropical climates, are a clear obstacle to economic development as they disrupt economic activity and reduce life expectancy, which in turn reduces investment in human capital (Sachs & Malaney, 2002). In severe cases such as the Bubonic Plague of the 14th century, they lead to demographic regression, depopulation of cities, and the breakup of the country's social and political structures (Courie, 1972). In the 1960s, the Danish economic historian and development economist Ester Boserup (1965) advanced her theory that population pressure is a fundamental determinant of the level of agricultural development and consequently the level of urbanization as well as the potential for economies of scale and specialization in industry. In the absence of population pressure—due to epidemics, famines and wars—peasants prefer to engage in extensive systems of farming that are far less labor demanding but misuse agricultural resources and are incapable of supporting large urban settlements. This is because peasants in pre-industrial societies have a high preference for leisure from which they derive greater marginal utility than consuming food above the subsistence level. Boserup's argument went against the dismal perspective of Thomas Malthus (1798) who argued in the early 19th century that unchecked population growth would eventually run up against the limited surplus of arable land, and the law of diminishing returns would cause per capita food availability to decline. But Malthus's

forecast ignored the possibility of technological progress especially in agriculture which not only was enough to meet the food demand of a growing population but also to supply quasi-industrial crops that are not necessary for human subsistence.

Boserup's argument does not go without criticism; in his "Economic History of West Africa" Hopkins challenges the idea that population growth would have been beneficial in the precolonial period. He speculates that 'an expanding population might well have caused more problems than it solved, and West Africa might have been faced, ultimately, with a Malthusian situation'. He sees the development of north-west Europe since the Middle Ages as the result of 'a fortunate coincidence' whereby 'long-run changes in factor prices made continuous innovation both necessary and rewarding' (Hopkins, 1973, p. 77). Moreover, meeting the food demands of a growing population does not necessarily entail agricultural intensification, in many cases it leads to the expansion of farmland using the same extensive agricultural methods especially if the quality of soils and the availability of water do not permit a reduction of the fallow period¹. Besides, agricultural intensification may be undertaken using the same archaic methods used for extensive agriculture as Lucette Valensi remarked about the precolonial Maghreb:

Ce qui frappe, par conséquent, c'est l'inertie es méthodes et des instruments de culture, même dans les régions où l'occupation du sol est la plus intensive, et le travail humain le plus minutieux.

What is striking, therefore, is the inertia of farming methods and tools, even in regions where land occupation is most intensive, and human labor most meticulous (Valensi, 1969/2004, p. 61).

Nevertheless, one cannot deny that since the ravages of the Bubonic Plague the sustained increase in Western Europe's population was a key factor in its economic growth, or deny that the successful modernization of Meiji Japan would have been possible without the country's countless and densely populated agricultural villages where cottage industries can thrive.

Geographic features such as accessible coasts, navigable rivers and lakes play an important role in creating integrated markets by reducing transportation costs (Radelet & Sachs, 1998) (Mellinger et al., 1999) (Mellinger et al., 2003). On the other hand, mountains and deserts as well as tropical jungles increase transportation costs which 'frustrate the needed trade linkages, and keep the inland market too small to support a refined division of labor' (Bloom & Sachs, 1998). Adam Smith noted that 'it is upon the sea-coast, and along the banks of navigable rivers that industry of every kind begins to sub-divide and improve itself, and it is frequently not till a long time after that those improvements extend themselves to the inland part of the country'

(Smith A. , 1776/2003, p. 28). The rise of the Low Countries in the Late Middle Ages as a manufacturing and trading powerhouse was facilitated by their location at the mouth of the Rhine and Meuse rivers whose navigability extend hundreds of kilometers into the interior of Germany and France.

The lack of accessible energy sources can be detrimental to economic development. Jared Diamond (1997) reminds us that draft animals were crucial to the advancement of Eurasian societies over those of pre-Columbian America, sub-Saharan Africa², and the Pacific Islands. Access to forests was also crucial not as a source of fuel for heating, cooking and metal smelting, but also of material for construction, shipbuilding, and making containers. Some argue that the expansion of the Roman Empire throughout Western Europe was partly driven by its quest for wood, which the Italian peninsula severely lacks. Later, the spread of industrialization in the 19th century depended heavily on the proximity to accessible deposits of coal (Pomeranz, 2000, p. 66), the burning of which yielded far more power per unit of surface than wood ever could' (Wrigley, 1988, p. 80).

Finally, geographic factors could have an indirect impact on economic development by shaping a country's economic, legal and political institutions. Europe's location and 'highly indented coastline' topography have long been used to explain the emergence of coastal city states in the late Middle-Ages, which led to the unprecedented growth of a merchant class and other communities associated with maritime trade. These emerging social classes had, in turn, acted as a formidable agent pushing for the type of institutions required for the expansion of trade and the creation of wealth (Diamond, 1997) (Landes, 1998). Some authors argue that in countries where physical environments are more conducive to plantation-based agriculture, less egalitarian and less inclusive institutions developed (Engerman & Sokoloff, 1997) (Easterly & Levine, 2003). Dani Rodrik (2003) sees that natural resource endowments in a country shape the quality of its institutions; abundance often creates rent-seeking and rent-distributing institutions that inhibit growth. In a series of article, Daron Acemoglu (2003) and his co-authors (2001) (2002) built a "germ" theory of post-colonial institutions on the observation that in colonies with an inhospitable germ environment (as measured by the mortality rate of European colonialists), colonial authorities established "extractive" institutions. On the other hand, "settler" institutions emerged in more hospitable environments where European colonialists were able to settle.

2. The institutions hypothesis

The role of institutions in economic development cannot be overstated. Institutions by themselves do not produce anything, yet growth and development cannot take place without them. Like the geography hypothesis, the institutions hypothesis has an impeccable pedigree. It goes back at least to John Locke, Adam Smith, John Stuart Mill, and Ronald Coase (1937) who is credited for presenting the first systematic theory linking institutions with economic activity. But it is the works of Nobel Prize winner Douglass North that highlighted the role of institutions in economic development as he argued that the key reason to the West's economic rise lays in its efficient institutional arrangements that broke the Malthusian trap which is the inevitable consequence of population growth to by creating the incentives to 'direct man's efforts towards technological change and sustained productivity growth' (North & Thomas, 1970).

A plethora of works linking institutions with the West's prosperity soon emerged. Rosenberg and Birdzell (1986) stressed the role of political pluralism and institutional flexibility in explaining "How the West Grew Rich". For Van Zanden (2009), efficient 'bottom up' institutions were key to "The Long Road to the Industrial Revolution" in Western Europe, while 'top down' institutions in East Asia hindered growth by failing to protect the powerless against those in power. In their latest and much acclaimed book "Why Nations Fail", Daron Acemoglu and James Robinson (2012) extend their analysis to Africa, Latin America, and Asia to conclude that man-made political and economic institutions underlie economic success or failure.

So what are institutions exactly and how do they affect economic development? And most importantly why had some countries developed a formidable arsenal of "market-friendly" institutions, while others got stuck in a "sub-optimal" institutional framework?

The most encompassing and widely used definition of institutions was provided by Douglass North; in his words:

Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic' (North, 1990, p. 3).

Institutions can be formal or informal. Examples of formal institutions are laws, regulations, property rights, and contracts. Among informal institutions are customs, conventions, traditions, beliefs, ethics, as well as taboos. Formal institutions are costly to enforce as they require official entities such as courts, bureaucracies, and a police

force, whereas informal institutions are “self-enforced” through the mechanisms of guilt, shame, expectations of reciprocity, gossip, shunning, boycotting, threats and even the use of violence.

Douglass North also distinguished between institutions (the rules of the game) and organizations (the players) which are entities composed of people who act collectively in pursuit of shared objectives. Organizations are either political (legislatures, political parties, government agencies, the judiciary), economic (private firms, trade unions, business associations), or social (schools, universities, and religious organizations).

Contrary to the neoclassical theory which envisions a frictionless economy where market transactions are costless, institutional economists argue that markets do not exist in vacuum. They require an institutional framework that allows transactions to take place in an orderly manner and at the minimum cost. Dani Rodrik explains that ‘markets require institutions because they are not self-creating; self-regulating; self-stabilizing, or self-legitimizing’ (Rodrik, 2007, p. 156). A well-defined institutional framework helps agents form expectations of what others will do so that rational optimizing decisions are taken. In contrast, a weak institutional framework raises transaction costs, limits the expansion of markets, and interferes with economic growth.

The foremost economic institution is that of property rights and its protection from, among other things, government expropriation. Secure property rights are crucial for providing agents with the incentives to undertake productive efforts without fear they will be deprived of the returns of these efforts, thus encouraging investments in capital and the efficient organization of economic resources. Formal contract laws and informal contracting mechanisms are another “uncertainty-reducing” institution central to the expansion of markets.

The rule of law and a fair legal system minimize social conflicts which divert resources from productive activities and create uncertainty. Moreover, as a country prospers it witnesses the emergence of various types of “economic parasites” who engage in redistributive endeavors rather than productive economic activity. Predatory tax collectors, rent-seeking coalitions such as guilds, government-enforced monopolies, and speculators prosper in perverse institutional environments where corruption is rampant; they could choke off economic growth at its early stages, unless properly checked by a legal system that gives voice to the powerless.

Social insurance and risk-sharing institutions, both formal and informal, are indispensable if individuals are to take risk, especially in subsistence societies where

change may spell disaster. For example, insurance against crop failures and price fluctuations for agricultural commodities give incentive to traditional farmers to move away from subsistence agriculture to cash crops.

A community's collective values, also referred to as social capital, such as trust and civic cooperation are an important determinant of its prosperity as they reduce the number of transactions that need to be enforced by a third-party. In the 19th century, Stuart Mill remarked that 'there are countries in Europe [...] where the most serious impediment to conducting business concerns on a large scale, is the rarity of persons who are supposed fit to be trusted with the receipt and expenditure of large sums of money' (Mill, 1866, p. 69). Kenneth Arrow could not agree more when he stated that 'much of the economic backwardness in the world can be explained by the lack of mutual confidence' (Arrow, 1972, p. 357). Paul Zak and Stephen Neck (2001) found that in economies where there is a high level of trust, the rate of investment and economic growth is likely to be higher than in low-trust environments. Robert Putnam (1993) explained how trust tends to be self-enforcing and cumulative as he argues that societies evolve toward two broad equilibriums: a good equilibrium with high levels of civic engagement, cooperation, trust and prosperity, and a bad equilibrium with isolation, exploitation, distrust and stagnation.

Finally, institutions must be well-defined but they must not be unchangeable. Flexible institutions are a necessity in a dynamic economy where innovation is not restricted to the fields of science and technology. Innovative organizations such as banks and corporations, which were at the heart of Europe's commercial revolution in the 16th century, needed innovative institutions such as corporate laws, patent laws, and the issuance of bank notes, as well as modifications to already existing institutions, the usury laws for instance. Joel Mokyr eloquently summed up the role of flexible institutions:

A successful economy [...] needs not only rules that determine how the economic game is played, it needs rules to change the rules if necessary in a way that is as costless as possible. In other words, it needs meta-institutions that change the institutions, and whose changes will be accepted even by those who stand to lose from these changes. Institutions did not change just because it was efficient for them to do so. They changed because key peoples' ideas and beliefs that supported them changed' (Mokyr, 2009, p. 22).

As already mentioned, geography may have played an important part in the emergence of "market-friendly" institutions first in the Italian city-states then in the Low-Countries and Britain. Surely, geography alone cannot explain the monumental

institutional developments that took place in Western Europe over a period of six centuries, from the Late Middle Ages to the eve of the Industrial Revolution. Indeed, the literature points to several factors that may have been at the root of these developments.

The institution of individual property rights is believed to have originated in England in 1215 when a group of rebellious barons imposed on King John a charter—the Magna Carta³—limiting his powers and protected their property from his arbitrary expropriations. Four centuries later, the Glorious Revolution of 1688 further curbed the king's authority and established participatory political institutions that were used to create and legitimize other market-enhancing institutions (North & Weingast, 1989).

The Protestant Reformation had also reformed Northern Europe's economic institutions by removing ecclesial interference in economic affairs. The abolition of just prices, the reduction of Church holidays and the secularization of Church holdings 'all released large amounts of labor and capital and arguably increased output' (Cantoni, 2010). Calvinism, which emerged in a bourgeois and urban society, was particularly favorable to business and approved of lending money against interest for commercial purposes.

The Bubonic Plague of the 14th century, or Black Death, triggered a series of institutional changes with far-reaching consequences as it paved the way for the dissolution of the manorial economy and the emergence of modern Europe (Herlihy, 1997). The epidemic, which killed a third of Europe's population, was a "blessing in disguise" for those who survived. Peasants whose skills became prized were freed of servile duty and began to earn wages for their labor. Guilds, in the face of labor shortages, became flexible in terms of their apprenticeship rules and adoption of labor-saving innovations. By the time Europe recovered demographically in the 16th century, those changes became consolidated paving the way for unprecedented growth in trade and urbanization as craftsmen were free to become more productive and competitive.

The voyages of discovery and the subsequent growth of the Atlantic trade may have intensified the institutional changes that were already taking place in Western Europe. Financial organizations that could mobilize larger capital and commit it for longer periods became a pressing necessity to finance long distance trade. Moreover, gold and silver from the Americas provided the European economy with the long-sought liquidity to facilitate trade and finance⁴.

Technological breakthroughs have had their share in shaping Europe's institutions. The role of the printing press is uncontested in spreading literacy and undermining religious institutions, while advances in fire-weapons starting from the 15th century altered the military balance of power between kings and nobility⁵, helping create centralized governments capable of instituting uniform laws. The effect of these technological breakthroughs was insignificant in the Islamic World and in China as they were adopted much later than in Europe and their use remained an exclusive monopoly of the state who feared their diffusion among the populace.

More than anything, the scientific revolution that swept Europe in the 17th and 18th centuries led to a better understanding of the natural world and the physical laws that govern it. Many of the scientific breakthroughs were applied to existing production methods both in agriculture and manufacturing resulting in higher yields and improved livelihoods for peasants and artisans alike. Joel Mokyr (1990) connected the economic prosperity of the West to the shifting attitudes toward science and technology during that period. When scientists, engineers, investors and bankers finally joined forces at the end of the 18th century, the last obstacles to growth came crumbling down and the West embarked in a period of almost uninterrupted economic prosperity that continues to this day. But most importantly, the scientific revolution made Europeans—particularly the British—more pragmatic about the institutions that govern their economies and were more willing to change them when necessity arises.

These factors, as well as others, may appear as a seamless succession of historical “accidents”, whose effects on European institutions can be easily isolated. The truth however, is that they were mutually influencing each other and in the process creating the complex institutional tangle that eventually produced the Industrial Revolution. Before engaging in an endless endeavor to disentangle the effect of each of these factors, which is beyond the scope of this thesis, the remainder of this section will review the literature on the obstacles to institutional development outside Western Europe. After all, countries must not endure the same historical “accidents” to develop market-friendly institutions.

This is particularly true for China, India, and the Islamic World which were, up to the 15th century, more prosperous and technologically advanced than Western Europe. These regions enjoyed vibrant economies, hosted the world's largest urban centers, and developed sophisticated institutions to cope with the exigencies of imperial expansion.

In the case of China, the literature points to the overly centralized government as an impediment to institutional change and economic development during the Ming (1368-1644) and Qing (1644-1911) dynasties. China's highly elitist and rent-seeking bureaucracy used its autocratic power to prevent the emergence of an independent commercial and industrial bourgeoisie. In 1433, they went as far as banning foreign trade, destroying maps and charts, and leaving the fleet to deteriorate. Moreover, the official Confucian ideology had long-term repercussions on economic development. Under the Confucian code of ethics, agriculture is the key to orderly society, while commerce was viewed as the necessary evil of economic activity, not to mention that merchants were of the same class as prostitutes and beggars. Finally, the bureaucracy and its extensive education system promoted an ethnocentric ideology that was indifferent to anything foreign to China.

In India, religion was the most important obstacle to institutional change and economic progress. The Hindu caste system prevented social mobility and the efficient allocation of labor as each occupation was subjugated to a rigid social caste. Lower castes were discouraged from entrepreneurship activities, while the rent-seeking upper castes resisted any change to the system. In short, the caste system blocked capitalist development in India and kept it in a state of stagnation.

The Islamic World, to which Morocco belongs, presents a different case than that of China and India. Starting in the 7th century, the Islamic religion inspired Arabs to conquer a vast empire stretching from Spain to the Indus River. Far from just a military enterprise, the Islamic empire witnessed an economic prosperity and cultural refinement unheard of since the fall of Rome. Agricultural crops and technologies spread throughout the empire⁶ enabling the growth of urban centers where crafts such as paper, glass and rug making flourished. By the year 1000, Cordoba was the largest city in Western Europe and Baghdad the largest in the world. But it was trade that made the Islamic economy vibrant. Caravans made of hundreds of camels traveled along reopened trading routes carrying silk, incense, spices, and other luxurious goods from India and the Far East, while gold, salt, and ivory were brought from the Sudan (sub-Saharan Africa). Maritime trade was also important; communities of Arab merchants sprang around the Indian Ocean from Mozambique to Aceh, and as far as Zaitun (Quanzhou) in China. The bulk of imported goods found their way to the Mediterranean ports of Alexandria, Antioch, Tunis, Bougie and Ceuta where they were shipped along with local products to Europe via Venice, Genoa and Marseille (Bernstein, 2008).

The growth of commerce in the Islamic golden age was not a mere consequence of empire expansion and strategic location. Islam played an important role in

providing an ideological and legal environment conducive to trade and entrepreneurship. The Quran praised 'buying and selling' and characterized profits as Allah's bounty to humanity. Prophet Mohammed was himself a merchant and most early scholars of Islam earned their living from trade. But it was the emergence of Islamic Law courts capable of imposing a common legal system and formalizing novel methods of payment and business organization that propelled trade and opened new horizons for merchants. Letters of credit (*sak*) and bills of exchange (*suftaja*) facilitated long distance trade as they freed merchants from the need to carry currency, while joint venture partnerships such as *mudharaba* and *musharaka* helped pool several investors to finance increasingly larger caravans and maritime voyages⁷.

Starting from the 12th century, the Islamic golden age came to a gradual halt due to a succession of historical "accidents". The Crusades in the Levant, the Mongol destruction in Persia and Iraq, the Reconquista in Spain, the Hilalian exodus to North Africa, and the European intrusion into the Indian Ocean all dealt a hard blow to the commercial prosperity of the Islamic World. Although the Ottomans were able to salvage most of the Middle East and North Africa into a powerful and highly organized empire, Muslim economies were never able to regain their commercial vibrancy in the face of an ascending Western Europe.

The literature provides a number of explanations for institutional stagnation in the Islamic World. For the Ottoman period, Pamuk (2004) sees that the dominance of the central bureaucracy over society and politics limited the influence of landowners, merchants, manufacturers, and moneychangers on shaping economic and legal institutions. He also blames the practice of tax farming⁸ for discouraging provincial notables from engaging in productive activities and establishing alternative institutions and mechanisms of capital accumulation. This was also the opinion of Barry Hawk (2015, p. 84) who argues that the rigidity of commercial and legal institutions in the Islamic World is a consequence of the subjugated political status of its cities. Despite their prosperity during the early centuries of Islam, cities never gained autonomy from the ruling polity as their Italian counterparts did starting in the High Middle Ages which enabled them to become centers for revolutions in commercial and legal institutions.

Timur Kuran (2011) devotes most of his academic writing to identifying the roots of economic stagnation in the pre-modern Islamic world. He argues that some of the legal institutions that were at the heart of economic prosperity in the early centuries of Islam, slowed or blocked the emergence of central features of a modern economy. The critical institutions in Kuran's view are those that affected the ability of

merchants and entrepreneurs to engage in impersonal exchange and to pool resources on a large scale and in a durable manner.

Typically intended for short-term business ventures, Islamic partnerships lacked legal personhood so they could not outlive their founders. On the death of one of the partners, the business was dissolved and assets were divided among the heirs according to an explicitly codified inheritance law. Although egalitarian to some extent, the Islamic inheritance law discouraged capital accumulation by dividing properties to increasingly smaller and uneconomical portions. The practice of polygamy complicated the situation by adding more heirs, thus increasing the fragmentation of wealth.

But it was the absence of the corporation, as a business organization, that was most detrimental to the prospects of pre-modern Muslim economies. Kuran explains that corporations never emerged independently in the Middle East because there was no demand for them. As business partnerships remained small and ephemeral, there was no need to develop standardized accounting methods and infrastructures for trading shares, two 'institutional preconditions' for the business corporation. Moreover, Islamic trusts or *waqf* provided many of the communal services that corporations were initially designed to provide in Europe.

Although they could outlive their founders, *waqf* differed greatly from corporations. They were not self-governing and profit maximizing entities, they lacked legal personhood, and an individual's income share was not transferable. According to Timur Kuran, reforms to the *waqf* system would have been resisted by vested interests, mainly judges who earned fees from monitoring the system. Finally, weak private property rights contributed to the persistence of the *waqf* institution whose sanctity protected it from predatory expropriation by despotic rulers. Kuran explains how a successful merchant seeking to shelter his wealth would convert it into real estate, which would be reconverted into a *waqf*; he then would proceed to 'appoint himself as the *waqf*'s manager-trustee (*mutawalli*), set his own salary, hire relatives to paid positions, and even designate his successor, thus bypassing Islam's inheritance regulations' (Kuran, 2011, p. 112).

3. The culture hypothesis

The idea that culture is a fundamental determinant of economic development goes back at least⁹ to Max Weber who, in his classical work "The Protestant Ethic and the Spirit of Capitalism", argued that the unparalleled achievements of the northern European nations were motivated by a set of values and attitudes that promote hard work, frugality, self-discipline, rationality, and a positive outlook to life (Weber,

1905/2003). Weber's theory was in direct opposition to that of Karl Marx, who viewed culture as determined by the underlying technology in a society: the hand-mill produced feudalism and the steam engine capitalism. Weber also proposed a cultural explanation for underdevelopment as he studied the world's major religions. He argued that Catholicism, Hinduism, Buddhism, and Islam promoted an "otherworldly" asceticism that preaches withdrawal from the material world, in contrast to the Calvinist "wordly" asceticism that seeks mastery over the material world (Weber, 1920/1993).

In 1968 and after ten years studying South Asian societies, the Swedish economist Gunnar Myrdal published his "Inquiry into the Poverty of Nations" where he argued that cultural factors, profoundly shaped by religion, are the principal obstacles to modernization. More recently, David Landes sought to explain why some nations are rich while others are poor and concluded that Max Weber was right and that 'if we learn anything from the history of economic development, it is that culture makes all the difference [...] what counts is work, thrift, honesty, patience, tenacity' (Landes, 1998, p. 516).

Culture is roughly defined as the body of values, beliefs, and attitudes that members of a society share, and are shaped by environment, religion, and the vagaries of history. Firmly embedded in a society's consciousness, culture shapes political institutions as well as social and technical arrangements, all of which simultaneously reflect and reinforce the culture that helped conceive them in the first place. Most importantly, cultural values indicate the degree to which a society considers entrepreneurial behaviors, such as risk taking and independent thinking, to be desirable. Cultures that value and reward such behavior promote a propensity to develop and introduce radical innovation, whereas cultures that reinforce conformity, group interests, and control over the future are not likely to show risk-taking and entrepreneurial behavior.

Mainstream economics has, until recently, overlooked the potential role of culture in explaining economic outcomes, largely because of the difficulty in measuring cultural attributes and separating their effects from those of institutions and traditional economic variables such as population growth, level of investment and price stability. Nevertheless, a number of scholars have investigated which cultural attitudes and beliefs facilitate or inhibit economic progress.

One of the first economists to present a theory that links economic development to culture was Joseph Schumpeter in his "Theory of Economic Development" (1934). He identified entrepreneurs to be the critical drivers of economic progress as they

make 'new combinations' out of existing economic resources to yield a larger amount of valued output for a given value of inputs. Schumpeter argued that no society was short of innovative ideas on how to combine existing economic resources more productively, but what many societies lacked was entrepreneurship: the process of applying these new ideas into the economy. He understood that most cultures resist and even penalize entrepreneurs since they disrupt the economic status quo, and explained that only those cultures that tolerate individuals who break with tradition, think differently and challenge vested interests could foster entrepreneurship and achieve economic progress.

Everett Hagen (1958) developed on Schumpeter's point and argued that pre-industrial societies lacked the cultural traits conducive to technological innovation. Among these are the value of personal achievement compared to social position, the attitude toward manual-technical occupations, and curiosity about the operation of the physical world.

The economic lag of southern Italy compared to the north was analyzed by Edward Banfield (1958) who argued that it was due to the excessive pursuit of narrow self-interest by southern Italians who never learned to trust anyone outside their family; a condition he labeled as "amoral familism". David McClelland (1961) restated Weber's spirit of capitalism through a special attitude named "need for achievement" defined as 'wanting to do well, with respect to standards of excellence'. He explained how some societies 'are not oriented enough toward achievement, toward doing a good job for its own sake [...] being focused on rewards, they may stop working when they acquire them, find inferior or dishonest methods of getting them, or refuse to take long-term risks with the money they do earn'. George Foster (1973) saw that traditional societies suffer from the "limited-good" syndrome, a mindset that induces people to believe that economic stagnation is the norm, and generates three counter-productive attitudes: rent seeking, restricted communitarianism, and fatalism. Early development economists such as Rostow (1960) and Hoselitz (1952) have also stressed the importance of cultural variables in economic development.

The "institutional revolution" in economics shed more light on the impact of culture on economic development through the channel of institutions. Douglass North states that 'in the short run, culture defines the way individuals process and utilize information and hence may affect the way informal constraints get specified' (North, 1990, p. 42), but later admits that 'examining the overall consequences of culture for economic performance is still in its infancy' (North, 2005, p. 57). Avner Greif (1994) studied the trading arrangements of two medieval trading communities, the individualist Genoese and the collectivist Maghribi (North African Jewish merchants

established in Cairo), and found that individualist societies started creating sophisticated formal institutions much earlier than collectivist societies. He concluded that differences in cultural beliefs lead to distinct trajectories of institutional development which in turn affect the rules of the game and economic outcomes.

Despite the fact that institutional economists drew a distinction between formal and informal institutions, the frontier between culture and informal institutions is still vague and needs further research. A practical distinction between informal institutions and the broader concept of culture was put forward by Gretchen Helmke and Steven Levitsky (2004). They casted informal institutions in the relatively narrow term of shared expectations rather than shared values. Shared expectations, such as trust and civic cooperation, involve reciprocity and a cost on those who break them and are thus considered informal institutions. On the other hand, shared values are the implicit and/or explicit conceptions of what is good, right, and desirable in a society. They influence an individual's selection from available modes, means and ends of actions and shape his/her behavior within society. Hard work, thrift, and need of achievement are "good" examples of shared values.

The last two decades witnessed a surge in works on culture and economic development, partly triggered by the success of East Asian economies. Important contributions include Lawrence Harrison (1985), Mark Casson (1993), Inglehart et al. (1996), Jean-Philippe Platteau (2000), and Geert Hofstede (2001). These works as well as others suggest that cultural factors affect economic growth through production and investment decisions, efficient allocation of resources, technological innovation and openness to trade. An interesting compendium of the literature can be found in "Culture Matters" edited by Lawrence Harrison and Samuel Huntington, where some of the most prominent social, economic and political scientists discuss the relevance of the cultural approach in their respective fields.

Chief among the contributors was Mariano Grondona (2000) who sees economic development as a cultural process in which a nation resists the temptations that arise from prosperity: 'Only those nations with a value system favorable to temptation-resisting decisions are capable of sustained, rapid development'. He provides a very useful 'cultural typology of economic development' in which he disaggregates culture into twenty factors that are viewed differently in "progress-prone" and "progress-resistant" cultures. Grondona's typology was further elaborated by Irakli Chkonia, Lawrence Harrison, Matteo Marini, and Ronald Inglehart, to include 25 factors:

Typology of progress-prone and progress-resistant cultures		
<u>Factor</u>	<u>High Cultural Capital</u>	<u>Low Cultural Capital</u>
WORLDVIEW		
1. Religion	Nurtures rationality, achievement; promotes material pursuits; focus on this world; pragmatism	Nurtures irrationality; inhibit material pursuits; focus on the other world; utopianism
2. Destiny	"I can influence my destiny for the better."	Fatalism, resignation, sorcery
3. Time orientation	Future focus promotes planning, punctuality, deferred gratification	Present or past focus discourages planning, punctuality, and saving
4. Wealth	Product of human creativity, expandable (positive sum)	What exists (zero-sum)
5. Knowledge	Practical, verifiable; facts matter	Abstract, theoretical, cosmological, not verifiable; debate matters
VALUES, VIRTUES		
6. Ethical code	Rigorous within realistic norms; feeds trust	Elastic, wide gap twist utopian norms and behavior=mistrust
7. The lesser virtues	A job well done, tidiness, courtesy, punctuality matter	Lesser virtues unimportant; love, justice, courage matter
8. Education	Indispensable; promotes autonomy, heterodoxy, dissent, creativity	Less priority; promotes dependency, orthodoxy
ECONOMIC BEHAVIOR		
9. Work/achievement	Live to work: work leads to wealth	Work to live: work does not lead to wealth; work is for the poor
10. Frugality	The mother of investment and prosperity	A threat to equality
11. Entrepreneurship	Investment and creativity	Rent-seeking
12. Risk propensity	Moderate	Low; occasional adventures
13. Competition	Leads to excellence	Aggression; A threat to equality and privilege

14. Innovation	Open; rapid adaptation	Suspicious; slow adaptation
15. Advancement	Merit, achievement	Family, patron, connections
SOCIAL BEHAVIOR		
16. Rule of law corruption	Reasonably law abiding; corruption is prosecuted	Money, connections matter
17. Radius of identification	Stronger identification with the broader society	Stronger identification with the narrow community
18. Family	The idea of “family” extends to the broader society	The family is a fortress against the broader society
19. Association (social capital)	Trust, identification breed cooperation, affiliation, participation	Mistrust breeds excessive individualism, anomie
20. The individual/the group	Emphasizes the individual but not excessively	Emphasizes the collectivity
21. Authority	Dispersed: checks and balances, consensus	Centralized: unfettered, often arbitrary
22. Role of elites	Responsibility to society	Power and rent seeking; exploitative
23. Church-state relations	Secularized; wall between church and state	Religion plays major role in civic sphere
24. Gender relationships	If not a reality, equality at least not inconsistent with value system	Women subordinated to men in most dimensions of life
25. Fertility	The number of children should depend on the family’s capacity to raise and educate them	Children are the gifts of God; they are an economic asset

Grondona’s “progress-prone” and “progress-resistant” cultures are ideal models that do not exist in the real world, yet they offer us two contrasting poles of reference against which we could evaluate the cultural values of a given society. Before engaging in this exercise it is quite clear that as a pre-industrial society—scantly touched by modern thought and technology—precolonial Morocco had a relatively low cultural capital. Thus the question I attempt to answer in this thesis is to identify the channels through which these “progress-resistant” cultural traits hindered the country’s modernization in the 19th century.

Being part of the broad Islamic World, precolonial Morocco has already been subject to several cultural evaluations. In “The Sociology of Religion”, Max Weber argued that the emergence of “worldly” asceticism in Muslim societies was blocked by two important social groups: the warrior group which emphasized pillage as a means of acquisition, and the Sufi brotherhoods which developed a mystical religiosity detached from the material world. Weber also blamed the patrimonial nature of Muslim societies for preventing the development of civil institutions that are necessary for capitalism. David Landes argues that Muslim culture:

(1) does not generate an informed and capable workforce; (2) continues to mistrust or reject new techniques and ideas that come from the enemy West (Christendom); and (3) does not respect such knowledge as members do manage to achieve, whether by study abroad or by good fortune at home (Landes, 1998, p. 410).

Moreover, Max Weber and other authors established a causal link between fatalism and the backwardness of Muslim economies and their “listlessness” to progress. William H. Norton (1924) asserted that although ‘fatalism was a large factor in the victories of early Islam, for it benumbed the fear of death in battle’ it had detrimental consequences on the economic prospects of Muslim societies as it ‘tends to paralyze the spirit of progress and science’. The Swedish scholar of comparative religions Helmer Rinngrén (1967) remarked that ‘Islam is a fatalistic religion which teaches that everything is determined in advance and that man is unable to do anything about it’. Maxime Rodinson rejected these claims and argued that there are no signs of fatalism and passivity in the Muslim world and that Islam is compatible to the spirit of enterprise which is the driving force of Capitalism (Rodinson, 1966/1973, pp. 76-78).

Another prominent “critic” of Muslim culture is Bernard Lewis (2002) who ascribes the retardation of the Islamic Middle East in the precolonial period to its lack of curiosity about the “Christian” West. Faced with European military and economic superiority, Muslim rulers and their advisors believed that things had gone wrong at home not right elsewhere, and the remedy they prescribed was a return to the early Islamic institutions that had once proven effective.

Conclusion

What are the obstacles to economic growth in a traditional economy such as that of precolonial Morocco? This theoretical review has highlighted three such candidates: geography, institutions and culture. Contemporary work on geography points out five major areas in which geography directly affects economic growth of a country: demography, agricultural productivity, transport costs, access to foreign

markets and availability of natural resources. The institutions school, however, contends that economic activity does not happen in a vacuum and that institutions are the rules of the game in a society and determine the performance of its economy. Institutions such as property rights, the rule of law and corporations were instrumental in the economic progress of Western Europe since the Late Middle Ages and their absence was a handicap for the economies of China, India and the Islamic World. The cultural hypothesis of economic growth claims that a society's shared values and beliefs are the operating principles that guide the behavior of its members and their decision making. Prominent among the cultural variables that are conducive to economic progress are hard work, tolerance to change, and need of achievement while cultures that promote fatalism, rent-seeking behavior, and "amoral familism" are doomed to economic stagnation.

Chapter 5: The Structure of the Precolonial Economy

The question of history is what each generation had done with its surplus produce. One bought games and amphitheaters; one, crusades; one, churches; one, villas; one, horses; one, operas; one, tulips; ours buys railroads, ships, mills, and observatories.

Ralph Waldo Emerson

The French historian Henri Terrasse (1947) famously characterized precolonial Morocco as a 'country with a strayed economy' to refer to the mediocrity of its agriculture, craft industries and domestic trade, but most importantly to conclude that only through European colonization that Morocco's economy was able to regain its natural destiny. Terrasse was vehemently criticized by post-colonial Moroccan historians for being an apologist of French colonialism and for belittling Morocco's precolonial economic structures to justify its colonization. Whether French colonization was justified or not is a controversial topic from which I would abstain, but the question remains: how mediocre were Morocco's economic structures?

In this chapter, I attempt to answer this question by providing a sketch of Morocco's precolonial economy. This will set the context for an analysis of the possible obstacles that hindered its modernization in the 19th century.

1. Agriculture and the peasantry¹

As any traditional economy, agriculture was the predominant economic activity and over 90 percent of the population lived in rural areas and were from a very young age engaged in farming or livestock raising. In the Atlantic Plains, rural society was organized around small communities called douar (br. *adwar*) made up of a varying number of peasant families sharing a common ancestor. The size of a douar depended on the intensity of agriculture; in the Chaouia Weisgerber (1907) reported douars of more than 100 tents in the Chaouia, whereas the Spanish traveler Ali Bey (1816, p. 134) observed douars in the Gharb of no more than 20 tents inhabited by shepherds. In the pre-Saharan valleys, peasants lived in fortified hamlets called *q̄sar* (pl. *q̄sour*). The douar and q̄sar acted as cultivation workshops where members from different families helped one another in the various agricultural activities, especially those that required haste.

Wheat (ar. *qamḥ*; br. *irden*) and barley (ar. *sh'ir*; br. *timzin*) were the principal crops in the plains; they were planted mostly in rainfed fields (*bour*) along with legumes which often acted as catch crops. As a drought-resisting crop, barley was preferred in the interior while hard wheat prevailed along the coast where maritime humidity help compensate for untimely rains; soft wheat was unknown in precolonial Morocco. Other staple crops include sorghum (ar. *dra beydha*; br. *tafsut*), millet (ar. *bishna*; br. *illan*) and maize (ar. *dra ḥamra*; br. *amezgur*) but their cultivation had a much limited extent. Cereals and legumes were the principal staples in the Moroccan diet and provided over 90 percent of daily calorie-intake. Once milled into flour or semolina, both wheat and barley were prepared into bread (ar. *khobz*; br. *aghrum*), pudding (ar. *'asida*; br. *takla*), pancakes (ar. *msemen*; br. *thagfin*), or couscous.

Plowing cereals starts in October when the first rains soften the hard parched soil; winter grains (ar. *bekri*; br. *amenzu*) are broadcasted immediately after then followed by a secondary plow to cover over the seeds. Peasants sowed between 90 and 120 kg of seeds per hectare. The seeding of winter grains had to stop by mid-January since seeds planted after that would not ripen by the harvest season. If the winter rains are insufficient, spring grains (ar. *mazuzi*; br. *amazuz*) are sown after February but their yield is mediocre in both grain and hay. During winter, fields are weeded, often manually in a process that involves all members of the peasant household. The start of the harvest season varies from one region to another. In Chaouia, barley was harvested in April-May and wheat in May-June, while barley can be harvested in the south as early as March. Peasants had to complete the harvest in less than 6 weeks for many threats loomed over their grain such as the sirocco wind, sparrow birds, and ants, but the traditional Moroccan peasant could only harvest 1/16 of a hectare per day in a plentiful year, and 1/10 in an average year; thus a 12 hectare field would necessitate the labor of up to 4 individuals to be completed in 6 weeks (Couleau, 1968, p. 168).

Vegetable-gardening (*bhira*) took place where land was well irrigated. Water was also crucial in the pre-Saharan river valleys where date palms are the economic pillar of a fully settled peasant community who for centuries engaged in subsistence farming under their shade. Water-thirsty commercial crops such as cotton and sugarcane were mostly found in the irrigated perimeters of the Haouz, Souss, Tadla and the Gharb, but also in vicinity of towns.

The use of archaic tools and inefficient practices remind us that the notion of agricultural progress was foreign to precolonial Morocco. A French traveler summed up the state of agriculture with the following words:

Also, agriculture has been stationary for centuries. Two thirds of the land is uncultivated; the last third is plowed by a helpless plow, whose plowshare is often made of wood. The only known fertilizer is the ashes of the field, burnt a few days before plowing, to which casually mingles droppings of the herds. Only natural agents come to help agriculture. Moreover, all the calamities fall on the improvident populations (Rey, 1840).

Nevertheless and despite its archaism, precolonial agriculture was capable of providing a slightly-above-subsistence diet to the majority of peasants, especially in the Atlantic Plains, and at times producing a considerable surplus that was either stored or sold in the weekly markets. At the dawn of the Protectorate, a French report on the Chaouia concluded that 'affluence is general' and 'real misery is rare' among the peasants (M.S.M., 1915, vol. 1 p. 195).



Figure 3: Wooden plow drawn by malnourished animals

Farming instruments were rudimentary and reminiscent of ancient times; attempts to modernize them in the precolonial period were shy and their results unnoticeable. The hoe was the standard tool for terrace farming in the river valleys of the Atlas and Rif. In the plains, peasants relied on wooden plows² (ar. *meh̄rath*; br. *awllu*, *imassen*, *asghar*) pulled by an often malnourished yoke to scratch the surface of the soil without turning it. Peasants used whatever animal available to pull their plows; if these were insufficient, women complemented their task:

A camel and a donkey are occasionally used; and, strangest of all, a woman may some-times be seen joined to the fortunes of a donkey in this useful but lowly toil (Leared, 1876, p. 287).

Plows were made of oak wood and weighted less than 20 kg as they contained very little metal; in some regions the plowshare was also made of wood, hardened with fire. Yet, plows in precolonial Morocco had the advantage of being easily carried in case of tribal unrest. Sickles (ar. *menjel*; br. *imger*) were used for harvesting cereals but these were 'extremely small that they made the task longer' (Durieu, 1844).

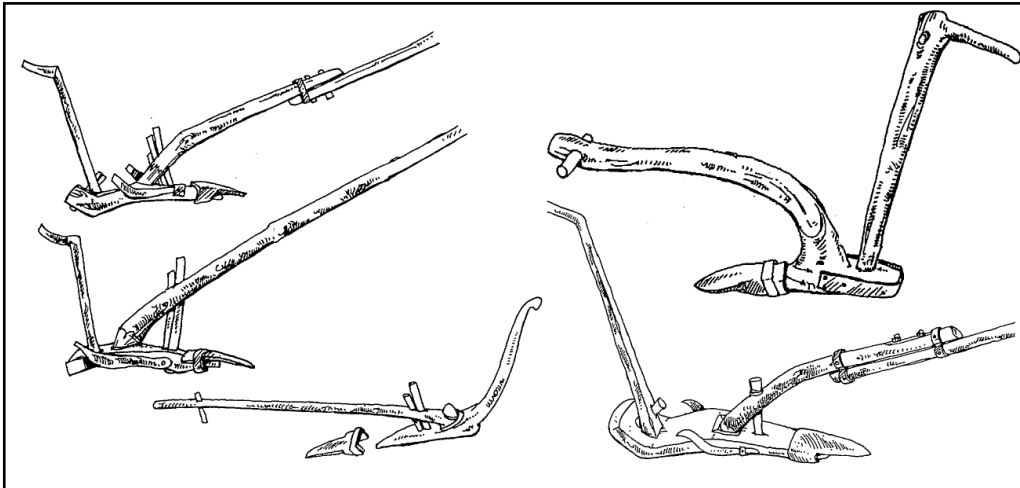


Figure 4: Common plows in precolonial Morocco (Chiche, 2000)

The archaism of agricultural techniques is also evident in the exploitation of underground water. Animals were used to pull water from wells and transport it to its destination: small animal-powered water-wheels (ar. *na'ora*; br. *tan'ort*) were used for shallow wells and springs while direct pulling was necessary for deeper wells. Pumping technology, although known in Europe since the Late Middle Ages, was unknown in precolonial Morocco; William Lemprière observed that Moroccans:

[...] are unacquainted with the invention of pumps, and have but few springs, it affords employment to a number of indigent people, who would probably be idle otherwise, to carry water in skins from the nearby river or reservoir (Lemprière, 1793, p. 105).

This had limited the extent of irrigation to the vicinity of permanent rivers and springs, as well as rendered impossible the regaining of agricultural land submerged by swamps. Henry Duggard (1917) observed in the early years of the Protectorate that the Souss plain is endowed with light soils that could be made fertile when watered, but aridity limits the cultivated area to only one sixth of the total arable land; he remarked that this area could be 'augmented through better irrigation and an intelligent use of the aquifer which is attainable at 12 to 14 meters of depth'. But pulling water from such depths for the purpose of large-scale irrigation is uneconomical if powered by human or animal energy.

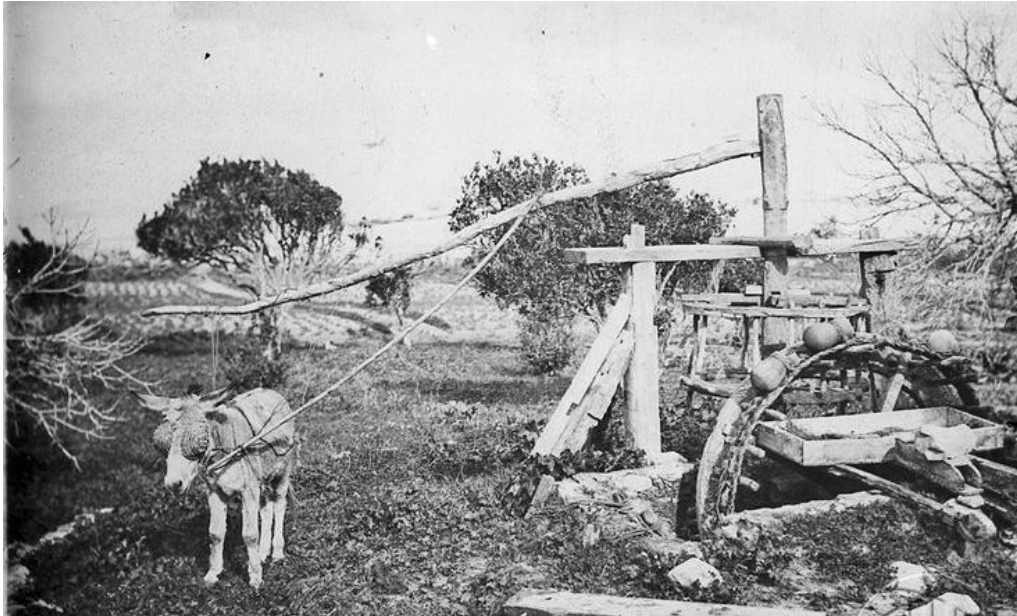


Figure 5: Animal-powered water-wheel

Data on agricultural production in the precolonial period are scarce and cannot be used to construct reliable estimates on agricultural yields and the surface devoted to farming. According to François Bernard (1917, p. 154), wheat yields ranged between 7 and 15 quintals per hectare (qx/ha) in the rich soils of the Atlantic and Eastern plains³. But such relatively high yields cannot be generalized to the rest of the country. Surveys of traditional agriculture in the mid-20th century reveal an average yield of 6 qx/ha for hard wheat and 8 qx/ha for barley (Martin et al., 1967), while yields in the arid south were inferior to 3 qx/ha (Douguédroit et al., 1998)⁴. As for the area devoted to cereal farming, it depended on the available rural labor force which was reduced in the aftermath of wars, famines and epidemics. It also depended on the availability and quality of draft animals capable of pulling a plow⁵; this in turn depended on how bountiful the previous year's harvest was. The chronicler al-Qadiri reported that although rain was abundant in the year 1739 most peasants could only plow a portion of their land due to the scarcity of draft animals:

And among the events of that year is the abundance of rain so that people started plowing despite their weakness, but because they lacked draft animals they plowed using hoes. Those who had the means plowed using donkeys. Very few of them plowed with large animals (al-Qadiri, 1772/1986, vol. 4 p. 18).

The yield of other important crops was not far from the pre-industrial average. In the Chaouia, maize returned 20 qx/ha which compares favorably to the U.S. average in 1860. Catch crops such as garbanzo beans had the astonishing yield of 50 to 1 or the equivalent of 25 qx/ha; flax seeds yielded 30 to 1 or 15 qx/ha.

Arboriculture was exceptionally diverse in precolonial Morocco; James Grey Jackson remarked that the 'vicinity of Tetuan produces the most delicious oranges in the world [...] abounds also in vineyards, the grapes of which are exquisite and in great variety' (Jackson, 1810, p. 11). The region of Marrakesh was known for its pomegranates and the nearby mountains were abundant in almond and walnut trees, while Doukkala's red grapes had no equal in the country. The pre-Saharan valleys of Draa, Tafilelt and Figuig produced many varieties of dates that were prized across the Atlas Mountains and exported to Europe. But exorbitant transportation costs and archaic preservation methods kept fruit prices depressed and never created the impetus to expand areas under arboriculture. Moreover, arboricultural methods remained very archaic and negatively affected fruit yields. Olive trees for example were left to grow high and required beating at the time of harvest, which damaged young branches causing the next harvest to be mediocre (Michel, 1997, p. 173). In his 1845 voyage to France, as-Saffar observed how the olive tree there 'does not become overgrown as it does in Morocco' praised the quality of French olive oil, which he described as 'exceptionally sweet and clear' (as-Saffar, 1846/1992, p. 98). In contrast, Moroccan olive oil was exported to Europe exclusively for industrial purposes such as soap making and machine lubrication (Miège, 1962/1996, vol. 3 p. 421). The poor quality of oil reflected the archaic process of extraction and storage; Mouliéras described pressing mills in the Rif as 'a little too primitive' (1895, p. 128).



Figure 6: A man-powered olive oil press in the Rif

As already mentioned in the first chapter, forests were an essential resource in peasant economy. They provided the natural fodder necessary for livestock grazing,

charcoal for cooking, as well as wood for making plows and other farming instruments. Peasant communities living near forests were also avid beekeepers, and honey was an important component in peasant diet but it was also used for cleansing and healing wounds and boils. Surplus honey and wax were sold in the weekly markets and represented an important source of cash revenue to these communities.

Irrigation was used wherever the water supply allowed it, but it only took a large scale in the pre-Saharan river valleys, the Souss and in the Haouz of Marrakesh where rainfall is below the minimum needed to support rainfed farming. Water was raised by small dams or water wheels and transported using a system of surface canals (*saquia*). Systems of underground aqueducts (*khettarra*) were also used to tap the aquifer and they extended over hundreds of kilometers; the Tafilelt alone had an underground network of 2,900 km that enabled the irrigation of 16,000 hectares. The ingenious process of constructing a *khettarra* consists of drilling a “mother” well to reach the aquifer; up-sloping galleries were then dug from the destination toward the mother well. Finally, vertical shafts are excavated along the route for aeration and maintenance purposes.

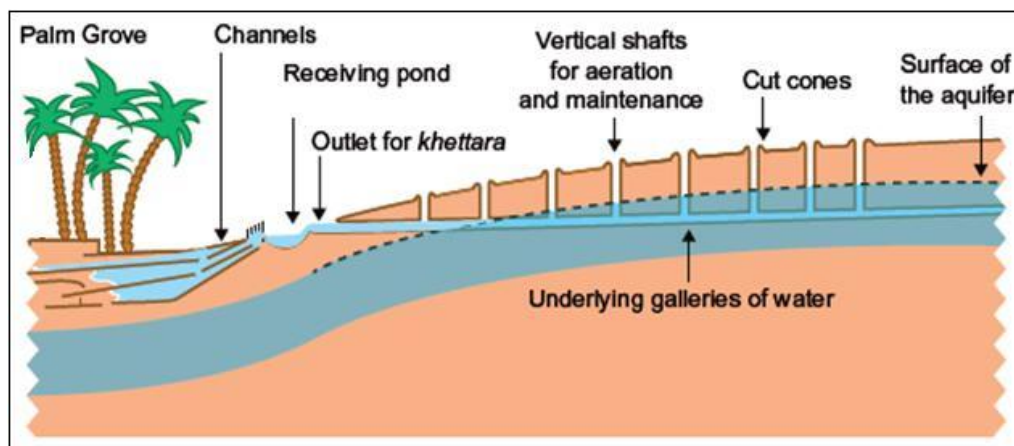


Figure 7: An illustrative diagram of a *khettarra*

The building and maintenance of irrigation infrastructure was based on a high degree of social cohesion, while water distribution was dictated by meticulous customary laws. Water shares were distributed to each family according to its contribution to the construction of the *saquia* or *khettarra* and regardless of the size of its land. The volume of water shares was measured by time: the number of periods (*nuba*) water is diverted every month to a family’s plot. The length of a *nuba* is either 24 or 12 hours and each *nuba* is often subdivided into multiple shares (Hammoudi, 1985, p. 40). A *sheikh* was elected by the community to settle water disputes and a *mezreg* (aiguadier) to supervise the water distribution.



Figure 8: Flow splitter to distribute water shares

The communal nature of the *douar* limited the need for remunerated agricultural labor. In the Atlantic Plains, individuals with abundant land would hire a sharecropper (*khammas*) and provide him with seeds, tools, draft animals, and enough grains to feed him and his family in exchange for a fifth of the harvest. In another arrangement called *bil-khobza*, the landowner's contribution is limited to land and the sharecropper provides everything else in exchange for a larger share of the harvest. There were other sharecropping arrangements for vegetable-gardening and livestock-raising. Overall, sharecropping agreements were dictated by tradition and there is little evidence to suggest that they were subject to changes in market conditions such as in the aftermath of a demographic crisis. In regions where arboriculture is important, day laborers (*waqqaf*) were hired during the picking season, and were often paid in kind. Nevertheless, remunerated agricultural labor existed and peasants in the Atlantic Plains hired reapers from as far south as the Draa valley. The growth of maritime trade seems to have had positive fallouts on agricultural wages in the Chaouia: Arthur Leared (1876) reported a daily wage of 6 to 8 pence (1 to 1.3 dirham), by the early 20th century agricultural laborers earned 4 to 6 dirhams per day (M.S.M., 1915, vol. 2 p. 43).

The use of slave labor in agriculture was limited to the large estates, but it never took the exploitative scale of slavery in the New World. Sir West Ridgway remarked that 'about one twenty-fifth of the entire population of Morocco are slaves, though many of them are to all intents and purposes free' as 'they are never worked in gangs or driven by overseers, as used to be the case when slavery was an institution in America' (Ben-Srhir, 2006). In fact, agricultural slave labor was so scant that John Drummond-Hay failed to notice it during his forty-year stay in Morocco:

[...] slavery in Morocco exists in the mildest form. Slaves are not used for agricultural purposes [...] and are generally the spoilt children of the house (Drummond-Hay, 1896, p. 357).

There are other accounts however that confirm the opposite; Michaux-Bellaire (1910) observed that 'male slaves are generally employed in farm work and their situation is not worse than that of free domestics employed at the same tasks, it is often better'. Not considered as slaves, the dark-skinned *harrattin* (sing. *harttani*) in the pre-Saharan river valleys were prohibited from owning land and were confined to share-cropping roles and community tasks such repairing irrigation canals (Ensel, 1999, p. 169).

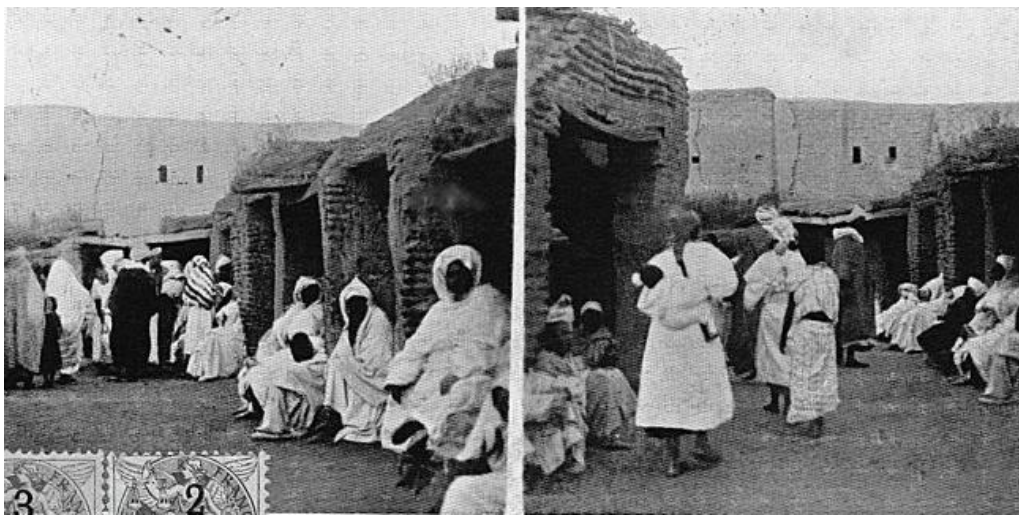


Figure 9: The slave market of Marrakesh in the early 20th century

Most slaves were brought from West Africa and driven in groups of 4 to 500 to walk across the Sahara in inhumane conditions; many perished in the journey. Once the caravans reach the pre-Saharan valleys of Draa and Tafilelt, slaves were auctioned off to the highest bidder before being transported across the mountains. It is not clear if slaves were commonly sold in the rural markets of the Atlantic Plains, but the existence of slave markets is well documented in the larger cities (Figure 9). The price of a slave depended on gender, age and health condition as well as experience: slaves who spoke the language fetched a higher price than those who just arrived. One could conclude from the various European travel accounts that the price of slaves varied from 50 to 100 piastres in the 19th century. Female slaves were particularly valued for their beauty and physical attractiveness; James Richardson (1860) reported that 'one day a beautiful African girl, freshly exported from the interior, was sold for 160 ducats, or about £20 sterling' while James Jackson (1810) claimed that he personally witnessed the sale of a 'young girl from Houssa of exquisite beauty' for 400 ducats.

Although not as exploitative as in the Americas, slavery in precolonial Morocco was far from an uncontroversial subject and a number of learned Moroccans wrote to condemn it. The chronicler al-Nassiri for example wrote in his *istiqla*:

It is thus clear to you the extent of this scourge, which is the enslavement of the people of the Sudan who are brought every year in large numbers, like herds, to be auctioned in all the markets of Morocco, urban and rural, like beasts of burden. Without shame, people turn a blind eye to this crime that has been in the open for a long succession of generations, so much so that the majority of people now believe that the defining characteristic of a slave is the darkness of his complexion and its provenance from that region. (al-Nassiri, 1894/2010, vol. 2 p. 320)

Unfortunately, slavery would persist in Morocco into the 20th century and it took the French Protectorate 20 years to finally abolish it as a legal institution.

The division of labor in rural society was most striking along the gender line. From an early age, peasant women toiled longer hours performing the most strenuous chores both in their homes and on the fields:

Among them, women are responsible for all the hard work. Men, young and old, travel, visit markets, and wage war. Often silent, they spend their days squatting or lying down, eyes fixed on the herds grazing and on the working women. These, under the burning sun and carrying a child suspended to their breast or on their back, often go one or two leagues of the douar to fetch water, collect wood, pull the plow instead of the donkey or the mule when they are traveling, milk the cows and take them to the fields; they rise three hours before the day to prepare the evening couscous (Rey, 1840).

Despite their contribution, women rarely benefitted from the fruit of their labor as their work was not remunerated; only men had discretion over surplus agricultural produce and whether to store it or sell it in the weekly market. Moreover, in most rural communities women never received their prescribed share of inheritance, excluding them from land ownership in an economy where land constituted the principal form of wealth. Thus, from an economic perspective, the status of rural women was no better than that of slaves. It is no surprise that many rural women did not oppose their husbands if they wished to take a second wife for additional helping hands were always welcomed.



Figure 10: Rural women carrying dry vegetation for the purpose of cooking

One of the distinguishing features of Moroccan agriculture in the precolonial period was the combination of crop-growing and livestock-raising. Arid and forested regions tended to rely more on livestock than on crops, nevertheless ‘in all the natural environments of Morocco and in each of its rural communities, it [livestock] constituted an essential element of the economy’ (Michel, 1997, p. 177). The size and composition of the flock depended on a number of factors. Sheep was, and remains, the predominant livestock in most of the country, while goats were preferred in the rugged terrains of the High and Anti Atlas. Cattle was more common in the northern part of the country especially in the Gharb where swamps provided an all-year source of water. In the densely forested and well watered land of the Zemmour tribe, individual flocks were important and consisted on average 4 to 5 cattle, 13 sheep, 6 to 7 goats and 1 to 2 donkeys, horses or mules (M.S.M., 1918, vol. 3 p. 239).

In addition to their conventional uses, livestock represent a family’s savings which could be redeemed for cash in the nearby weekly market or presented as a gift in weddings and special occasions. In the river valleys of the Atlas and Rif where land is scarce and intensively farmed, livestock provided the manure to maintain soil fertility and protect it from degradation. But livestock was vulnerable to the vagaries of the weather and was first to be forfeited when signs of a drought appear. Let’s keep in mind that it took time to rebuild a decimated flock after a prolonged drought, which explains why peasants remained frugal in their meat consumption even in plentiful years.

Despite the importance of livestock in the rural economy, peasants in the Atlantic Plains did not appropriately care after their animals and left them in the open at the mercy of the natural element (Vaffier-Pollet, 1906) (Miège, 1956), nor did they grow any forage plant so livestock had to graze on the communally-held pastures and once those were exhausted on nearby forests and scrublands⁶. There was no selective breeding of animals so that nature produced a hardy type that could survive the harsh North African environment. The yield in meat per animal was meager so the only way to increase meat output is by multiplying the flock, putting additional pressure on water resources and pastures:

Moroccan cattle is subject to no care; it grazes at liberty and never receives any additional food, whatever the condition of the pasture; at night, it is parked in enclosures protected by thorny branches, cactus and ditches, without shelter, no matter what the temperature is. The only intervention is made during the calving of females, and to protect the new-born. The natives have never practiced any form of selection as they always let mating happen at random and they do not seek any specialization (Monod, 1914).

This agro-pastoral combination as well as the political realities of the country shaped the land tenure system in rural Morocco up to this day. As a general rule, crops were often grown in individually owned plots (*melk*) while the adjacent pastures were collectively held (*jmou'*) by the rural community (i.e. *douar* or tribe). In the densely populated plains such as Doukkala and 'Abda, peasants were predominantly cereal farmers so individual ownership was dominant and land was often enclosed with stones or Barbary cactus. In less populated regions, livestock played a more important role making collective ownership more practical even for cropland; this later was periodically⁷ redistributed among peasant families according to the number of draft animals each possesses, but also to allow for its rotation. The typical allotted plot ranged from 8 to 12 hectares per pair of draft animals (ar. *zouja*; br. *tayuga*), for it could only plow a third of a hectare per day on average⁸. A similar process of land redistribution was practiced in the narrow valleys of the Atlas and Rif Mountains where terraces were held communally and every year it was parceled out among the families by the tribe's governing council (*jma'a*) so that each family was given an equitable share of the scarce resource.

Most *melk* was of medium size that is no more than a *zouja*; many peasants owned just half a *zouja* (*ferd*) and had to rent land to meet their annual food needs. Large estates were the exception as only tribal notables and appointed quids could accumulate land through unscrupulous means often at the expense of collective land:

No doubt it could happen that within one of these communities emerges a powerful personality who, through his prestige and strength, took to himself all or part of collective land and thus built a real private property. If this power did not have the time to establish solid foundations, it disappeared with the person who had founded it, and the acquired or usurped property returned to the community; if however, the foundation was strong enough to become hereditary, the private property was created and the collective land of the rest of the tribe fell as well in the control of the family who now had authority over the entire community (Michaux-Bellaire, 1924).

These estates hardly exceeded 50 hectares and were not better exploited than the smaller properties; the same processes were employed but on a larger extent.

The concept of individual property remained loose in precolonial Morocco for three main reasons. First, the tribe was less inclined to protect land held by one of its members from the transgression of Makhzen officials at least as much as it would defend collective land from encroachments by neighboring tribes. Second, Moroccan peasants lacked written documents to prove their ownership as the concept of land registration was unknown in the precolonial period. Finally, *melk* land remained subject to strict customs that forbade its transfer to outsiders. As an example, European settlers found it difficult to purchase land in the Chaouia even after the establishment of the Protectorate:

The purchase of land is difficult and is considered a delicate transaction. To buy a plot of land it is necessary to live for a period in the region and to have an indigenous or Jewish representative who is fluent in colloquial Arabic (M.S.M. 1915, vol. 2 p. 113).

And those who managed to purchase good land were often subjected to interminable lawsuits by relatives of the seller.

Some land was transferred by their owners into trusts (*habous*) with the income being devoted to charitable or religious purposes. These were generally orchards and irrigated gardens located around cities; they were transferred into *habous* to prevent their fragmentation into uneconomically plots. The sanctity of the *habous* institution was an incentive for a number of landowners to transfer their land into trusts to protect it from wrongful confiscation then simply assigned their descendants as beneficiaries. A typical *habous* land would be rented to a tenant farmer according to the aforementioned *khammas* or other sharecropping arrangements.

A sizeable portion of agricultural land in precolonial Morocco was classified as Makhzen land. These were in the easily accessible Atlantic Plains and confiscated from rebellious tribes or governors who had fallen out of favor with the sultan. For all intent and purposes, Makhzen lands were directly controlled by the sultan and his extended family who exploited them as they pleased using *corvée* labor (El Aissaoui, 1999). There were also the *guish* (military) land whose exploitation and usufruct were forfeited by the Makhzen to particular tribes in exchange of providing military service to the sultan and participate in his campaigns to subdue rebellious tribes. Most *guish* land was located in the vicinity of Fez, Meknes, Rabat, Tangiers and Marrakech as well as strategic agricultural regions such as Tadla and the Gharb to protect them from the predation of neighboring unsubdued tribes (Le Coz J., 1965).

Rural architecture varied with the inhabitants' lifestyle. Semi-nomadic tribes dwelled in tents (ar. *khayma*; br. *takhamt*), which could be transported to the summer pastures. Tents were set up to create a circle to protect livestock from marauding thieves and wild predators. The typical tent was spacious enough for the whole family; it was made of sheep wool, camel and goat hair weaved in an intricate manner to make it impermeable. The archaism of the tent may give the false impression that it was cheap, but in reality it was the peasant's most valuable asset. The typical tent consisted of 10 long sheets (*flij*), each measuring 8 to 10 meters in length and less than one meter in width. Each year the oldest *flij* in the tent is replaced by a new one. The weaving of a single *flij* necessitated hours of labor and consumed the fleece of at least 10 sheep. In the early 20th century, the price of a *flij* ranged between 3 and 4 silver riyals, so an average tent can be valued as much as 40 silver riyals; to put this in perspective, the daily wage of an unskilled laborer at the time was 4 dirhams (0.4 riyal). Peasants with limited means used vegetal material—dwarf palm leaves and asphodels—along with wool and goat hair to make their annual *flij*.

More settled tribes preferred permanent dwellings, but even these were rudimentary. The *nwala* for example is a transportable hut made of thatch; it was the most common form of habitat in the settled and densely populated coastal plains such as Doukkala and Chaouia where its price was 12 riyals in the early 20th century (M.S.M., 1915, vol. 2 p. 303). Brick dwellings (ar. *dar*; br. *tiguemi*) were the dominant habitat in the Rif, the High and Anti Atlas as well as the Souss where settled Berber populations engaged in intensive cereal farming and arboriculture. Some Arab tribes such as the Hyayna and Cherarda also built stone houses and enjoyed a fully settled lifestyle in the plains near Fez and Meknes. In the pre-Saharan river valleys, the aforementioned *qsar* was more appropriate for the communal aspect of irrigated agriculture. Each *qsar* housed many families, and enclosed several communal facilities such as a mosque, oven, bath and a granary, but most importantly it

protected the settled peasants from the attacks of nomadic tribes such as the notorious Ait 'Atta who roamed the northern fringes of the Sahara desert.

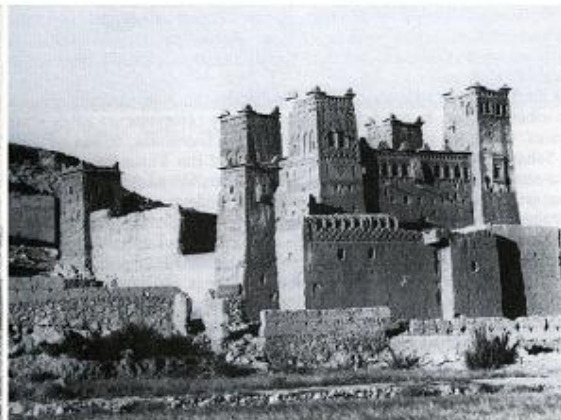
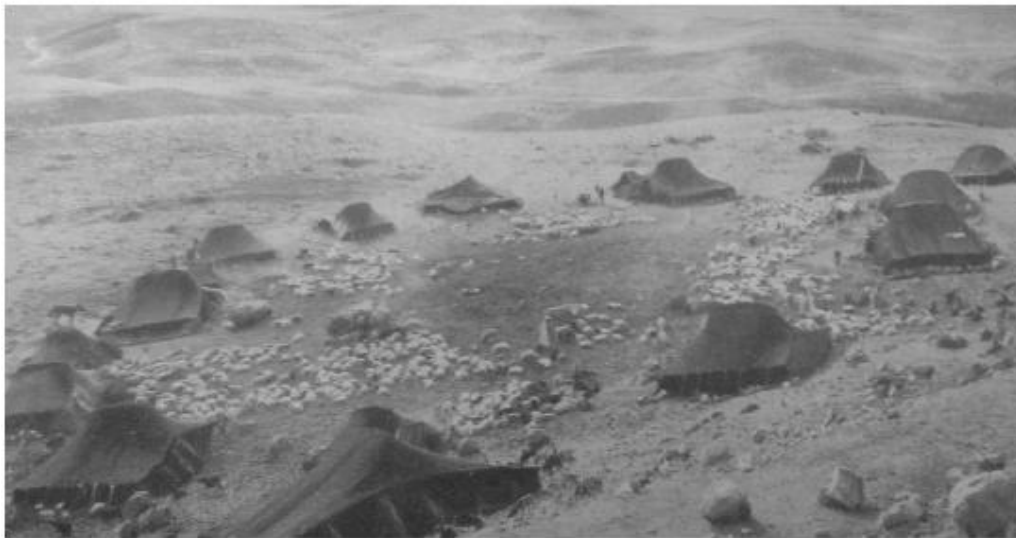


Figure 11: Rural architecture in precolonial Morocco

The tribe (ar. *qbila*, br. *taqbilt*) was the prime institution of rural society and around it was organized much of its social and political affairs; loyalties beyond its limits were feeble. Made of interlocking factions (ar. *fakhda*; br. *ikhes*), tribes would often engage in confederations to defend their land, livestock, and granaries as well as to maintain grazing rights over the summer pastures. Semi-nomadic tribes had to conclude pacts with neighboring tribes to insure the peaceful conduct of their seasonal movements. "Lactation" pacts (*tada* or *tata*) were common among the Berbers of the Atlas:

Seven breastfeeding women are chosen from each of the two parties; their milk is mixed in a bowl which is passed around the men attending [the ceremony] so that each dips his lips (Marcy, 1936).

These pacts entailed a mutual obligation of assistance, a duty of hospitality and protection during the passage through the tribe's territory as well as a formal prohibition of inter-marriage; those who breach the pact are considered sinful and liable for a "divine curse", but can be atoned by the payment of a fine.

Tribal wars were an interminable business in precolonial Morocco, but one should not overestimate their gravity. There were bloody encounters that were triggered by trivial arguments between two individuals of different tribes, but as a general rule conflicts between tribes or against the Makhzen were an integral part of tribal politics and their goal was to improve bargaining positions rather than crush the enemy. Nevertheless, the insecurity these conflicts entailed had its economic effects in increasing the cost of trade and stifling capital investment in anything which could not be carried or, in the case of livestock, could not be herded to safety.

Egalitarian in nature, the tribe in precolonial Morocco inhibited the emergence of European-style feudalism (Pascon, 1979). There were pockets that resembled to some extent feudal fiefs; these '*azib*' were in the hands of powerful governors and Makhzen officials but 'were characterized by their precariousness' and failed to produce a hereditarily transmissible hierarchy of rural society (Michel, 1997, p. 364). Appointed by the sultan, some quids were able to amass large estates and subjugate the peasants to corvée work, but many of them were revoked and dispossessed at the sultan's discretion⁹. In his study of the Haouz of Marrakesh, Paul Pascon (1977) made the assertion that quids in precolonial Morocco were fundamentally different from the feudal lords of medieval Europe. First, quids were nominated by the sultan while feudal lords were the heads of autonomous principalities who drew their power from the '*solidarité vassalique de ses sujets*'. Second, quids never had serfs so they were never able to create mutual obligations with peasants. Finally, land that quids were able to amass during their term were always at risk of being confiscated by the

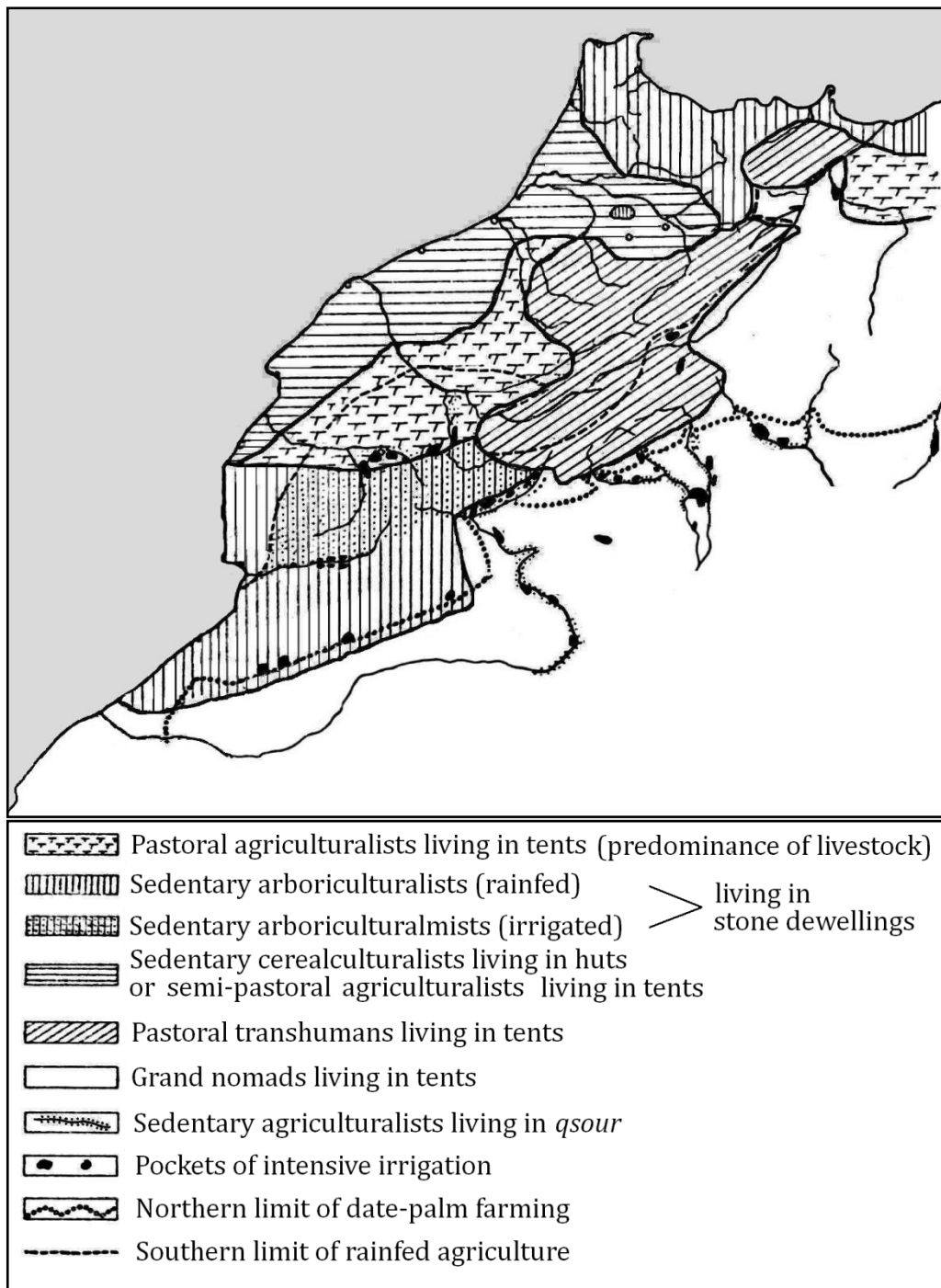
Makhzen after their demise; this was not the case of Europe's feudal lords who enjoyed complete protection over their fiefs. Paul Pascon coined the term "caidalisme" to describe the precolonial socio-economic formation but remarked that:

... the various parts of the country did not always experience exactly the same history and the historical duration of "caidal" forms was in some places either nil, more or less durable, more or less strong, and that as a result there was neither a unification nor material and institutional works that are mature enough to establish a direction and a relatively rigid order of social formation (Pascon, 1980).

The few feudal fiefs that enjoyed some longevity were those ceded by the sultan to the descendants of a *murabit*, known in French as marabout: holy men who were thought to possess divine benediction (*baraka*) which can be passed onto their descendants and close followers. Moroccan sultans understood that marabouts played a critical role in tribal politics as they reconciled feuding tribes and helped prevent the escalation of tribal hostilities. John Braithwaite visited one of these 'azib that belonged to a "saint" and reported that 'the people are all his vassals, and the produce of the country all round the town, at his disposal, the people paying no other taxes but to him' (Braithwaite, 1729, p. 131). From an economic perspective, these 'azibs suffered from a weak mode of exploitation as the landlords were 'less worried about yield than the prestige and clientelism' they brought (Berque, 1938, p. 26).

The expansion of maritime trade in the second half of the 19th century and the ensuing prosperity of protected merchants contributed to the growth in the number of 'azibs. Rich merchants reinvested some of their commercial profits in acquiring large tracts of land in the vicinity of Fez and along the road connecting Fez and Tangiers (Lazarev, 1977); they acted as absentee landlords leaving agricultural work to tenant farmers without seeking to adopt novel agricultural methods or improve productivity. In fact, the main purpose of these "latifundiums" was to secure a supply of food to the landlord and his household rather than a profitable venture from which he could derive a monetary income.

Another distinguishing feature of precolonial agriculture is that production was geared toward subsistence with little concern for commercial crops. The vagaries of the weather and the unreliability of trade channels to deliver agricultural goods have long taught Moroccan peasants to give precedence to cereals to feed their families and provide hay for livestock. Good years brought surpluses that were stored in hidden underground granaries¹⁰ (ar. *mattmura*; br. *tasraft*) in anticipation for bad years, which varied in length and severity. Extended droughts were disastrous to rural society, especially if they coincided with a locust invasion.



Map 3: Types of agriculture and rural lifestyle (Célérier, 1927)

The subsistence nature of the peasant “enterprise” makes it difficult to conduct a financial analysis of agricultural activity in precolonial Morocco. First and foremost, the purchase of land was restricted by tribal customs so its price hardly reflected its true economic value and contribution to agricultural production. A report on the Chaouia provides some insightful information about the prevailing prices, wages and rents in 1913 but also immediately before the French conquest:

- Land: 5 to 20 riyals per hectare depending on soil quality and proximity to a Casablanca. But these prices doubled after the French conquest.
- Draft animals:
 - Camel: 80 riyals
 - Horse: 50 to 110 riyals
 - Oxen: 60 riyals and more
 - Mule: 50 to 200 riyals
- Wooden plow: 3 to 4 riyals
- Digging a well: 40 riyals
- Daily wage for unskilled laborer: $\frac{1}{2}$ to $\frac{3}{4}$ riyals
- Barley: 3 riyals per quintal, but can go up to 4.5 riyals in bad years
- Wheat: 5 to 8 riyals per quintal

If an urban entrepreneur wanted to invest in cereal farming in the Chaouia, he could purchase 10 hectares of land at 200 riyals, dig a well for 40 riyals, buy two draft animals (horse and oxen) for 100 riyals, a plow and other farming material for 10 riyals. Then he would advance 10 quintals of seeds for 50 riyals, and another 10 quintals of barley for 30 riyals to feed the *khammas* and his family during the year. Assuming a yield of 10 qx/ha, the entrepreneur would keep 7 qx as 2 go to the sharecropper and 1 to the qaid for taxes. From his 10 hectares, our urban entrepreneur could earn 250 riyals after deducting operational costs, and transporting the wheat to the coast. That is a handsome annual return on his 350 riyals investment. But the lack of security and the risk of drought, locust invasion and pests, had long restrained such investments which explains why the price of land has remained depressed in comparison to pre-industrial levels elsewhere.

Rural communities were not self-sufficient just in foodstuff; they also produced most of their everyday utensils. Wool carding, spinning, and weaving were done by women to make garments, blankets, and the family tent:

Women work the wool and make the *burnus*, *djellaba*, *haïk*, blankets (*hendira*), cushions envelopes with multicolored designs, carpets (*hanbal*), saddlebags (*semât*) made with multicolored wool, saddle blankets (*ghettaïa*) (M.S.M., 1918, vol. 3 p. 169).

Peasant women were also responsible for churning milk to extract butter and hand-milling flour. Some peasants specialized in the production of pottery, palm mats, or plows which they sold in the weekly market. More sophisticated items such as footwear, tin utensils and guns had to be produced by specialized craftsmen in the towns and cities and transported to the rural markets by itinerant peddlers.



Figure 12: Weaving the material for making a tent's *flij*

2. Cities and industry

Urban life in precolonial Morocco was a reflection of the archaism of its rural life. Towns were few compared to the extent of the country and their economic life was tied to that of their surrounding countryside. Throughout their history Morocco's largest cities were above all administrative centers where economic activity was affected by the presence or absence of the sultan and his retinue of Makhzen officials; smaller cities subsisted as markets serving the adjacent rural population or as port towns from which merchandise transited. Fez, Marrakesh, Rabat, Salé and Tetuan had a long urban tradition and were renowned for the public services available to their inhabitants. Services such as water distribution, garbage collection, hospitals and Quranic education were financed through the aforementioned *habous* institution as well as donations from the sultan. Each city hosted a number of *zawiyas* that fulfilled a charitable role by providing food and shelter to the needy especially at times of scarcity when food prices become exorbitant.

The sultan appointed a mayor (*basha*) to supervise the city's political affairs but his rule was far from unchallenged; in many instances *bashas* were replaced at the behest of the inhabitants. The *basha* had under his command a number of *mokhazni* to establish law and order. The sultan also appointed the *amin mustafad* who collected market taxes, duties on monopolies and rents on buildings owned by the Makhzen. Each major city had a locally recruited militia to defend it in case of attacks from neighboring tribes but also to reinforce the sultan's army when engaged in major military operations.



Figure 13: Panoramic view of Fez around 1900

As most pre-industrial societies, the urban population in precolonial Morocco did not exceed 10 percent of the total. Fez was by far the largest city and the most important center of craft industries, producing most of the leatherwork, textile, and embroidery, as well as metalwork. Roger Le Tourneau (1949, p. 322) estimated that about a third of Fez's population relied directly on industry for its livelihood; trade was another important occupation and Fez merchants controlled the lion's share of Morocco's trade with the outside world. Other important centers of craft production include Tetuan, Rabat-Salé, Marrakesh and Taroudant, whose leatherwork and muskets were renowned throughout the country. The countryside was dotted with small towns that played an administrative role as the seat of a qaid as well as a permanent market for the neighboring tribes. Some of these towns housed a small community of Jews, many of whom travel to the surrounding weekly markets as petty peddlers or cobblers. But these towns maintained an agricultural character and were 'nothing more than large villages where the rural tribes gather' (Rey, 1840).

Precolonial Morocco had a highly developed social and economic stratification of its urban population, especially that of Fez. Carleton Coon (1958, p. 248) categorized the population of Fez into four classes: 1) wholesale merchants; 2) retail merchants; 3) master artisans; and 4) unskilled journeymen. Coon may have omitted the class of Makhzen officials and the 'ulama who were not involved directly in the process of production, he pointed though to the imperfect mobility between these classes: whereas the second feeds the first sometimes but the third 'only rarely does it feed the second' although it represents half of the total population of the city.

Interior towns	Population	Coastal towns	Population
Fez	80 – 120,000	Tetuan	10 – 30,000
Marrakesh	30 – 50,000	Salé	10 – 15,000
Meknes	20 – 30,000	Rabat	20 – 30,000
Taroudant	20 – 30,000	Mogador	15 – 20,000
Ksar el-Kebir	26,000	Tangiers	10 – 15,000
Ouezzan	10,000	Safi	8 – 12,000
Taza	6,000	Larache	5,000
Oujda	5,000	Casablanca	3,000
Settat	3,000	Azzemour	3,000
Demnat	3,000	Mazagan	2,000
Kasbat Tadla	2,000	Fedala	2,000

Table 3: Approximate population of cities and towns in the 1860s¹¹

In addition to the occupational stratification, Fassi society was composed of different ethnic groups that often went into conflict among each other. Chief among them were the *shorfa* who traced their lineage to Prophet Mohammed; they disdained commerce although they were exempt from taxes. The *andalusiyin* were the descendants of the Muslim refugees escaping the Spanish Inquisition in the 16th and 17th centuries; they maintained a tradition of scholarship and some of them held important offices in the Makhzen. The *bildiyyin* were the descendants of Jewish converts to Islam and they maintained close links among themselves which made others suspicious of their conversion; they were particularly discriminated against and at one point forbidden from the main market. The *lamttiyyin* were a marginalized group that consisted of the descendants of Berber migrants to the city. Finally, Jews held a peculiar place in Fassi society that ranged from contempt and humiliation by the general population to protection by the sultan who valued their craftsmanship and linguistic abilities¹².

Norman Cigar (1981) explained that these vertical differences prevented a true horizontal stratification of Fassi society and inhibited its merchants from forming ‘a cohesive, self-conscious group, much less effectively organize themselves politically to further their interests vis-à-vis the central government or other sectors of society’. Nevertheless, one could say that Fez produced one of the few precolonial bourgeoisies in the Arab world; but only after the independence of Morocco that its increasing economic power and intellectual advantage would enable it to play a leadership role in shaping the country’s political and economic institutions.

Industry in precolonial Morocco was reminiscent of medieval times. Production took place in small workshops where 'mass production was the exception' (Valensi, 1969/2004, p. 74); each workshop employed few artisans (*saane'*) and apprentices (*mt'allam*) headed by a master craftsman (*m'ellem*). Wages¹³ seem to be the most common form of remuneration in precolonial crafts and they generally were in line with rural wages. Certain crafts requiring particular skill, such as carpenters and wood painters, were better remunerated than others. In the early 20th century, wood painters earned 9 to 10 dirhams per day, a worker in a wax factory was paid 4 dirhams, while a metal worker in a gun workshop only took home one and a half dirham¹⁴. Apprentices were at the bottom of the pay scale and were paid less than one dirham per day. Only the most skilled craftsmen earned a daily wage of more than one riyal. To put this in perspective, a civil servant well-acquainted with several European languages was paid a monthly wage of 24 riyals for his work as a translator for the Makhzen (al-Manouni, 1985, vol. 1 p. 185).

To benefit from concentration spillovers, crafts tended to cluster in particular quarters (*hay*). Some of these bore the name of the industry they were associated with such as the *saffarin* for coppersmiths, *debbaghin* for tanners, *shema'in* for candle makers, *kherrazin* for shoemakers, *serrajin* for saddle makers, and *nejjarin* for carpenters. The tools were rudimentary and made by the artisans themselves, and apart from watermills to grind grain and crush olives, the use of mechanization was unknown. Le Tourneau (1937) observed that most artisans in Fez could neither read, write, nor make simple calculations, let alone conceive practical solutions to the problems that faced their industry. Nevertheless and despite the technical limitations, Moroccan craftsmen were able to produce high quality garments and footwear that were prized throughout the country as well as the Sudan and Egypt. A Scottish traveler—David Urquhart—wrote with amazement that 'the produce of the looms of Morocco today equals in beauty and taste, if it does not surpass, that of any country' (Urquhart, 1850, p. 94).

A striking feature of Morocco's precolonial crafts was their immutability and inability to innovate: garments and footwear commonly worn by Moroccans hardly changed since the 16th century and the same is true about firearms. Léon Godard blamed this fixity on 'the patents and the repercussions of the laws and administrative measures that paralyze commerce' as well as the 'solidarity between members of the same guild' (Godard, 1859, p. 111). Indeed, all urban crafts in precolonial Morocco were organized into guilds (*hantta*) that abided by unwritten rules (*'orf*) to protect rather than restrict their members. Master craftsmen elected a trustee (*amin*) from among their rank to act as an intermediary between them and the appointed market inspector (*muhtassib*) whose job was to supervise the city's

economic affairs. The *amin*'s chief duty was to make sure craftsmen in his guild abided by the rules and standards of the profession:

In case of a defective product, lamîn is assigned by the mohtasib to summon the worker so that his product is examined by the master-craftsmen who decide if it conforms to the rules of the profession or if there was fraud or poor workmanship (M.S.M., 1921, p. 217).

Normally, the selection of the *amin* was based on his reputation, composure and knowledge about the profession he is representing. The precolonial guild can thus be seen as a medium of government control over craftsmen and retail merchants but also as an organization that seeks to protect them from over-taxation and the greed of intermediaries and speculators.

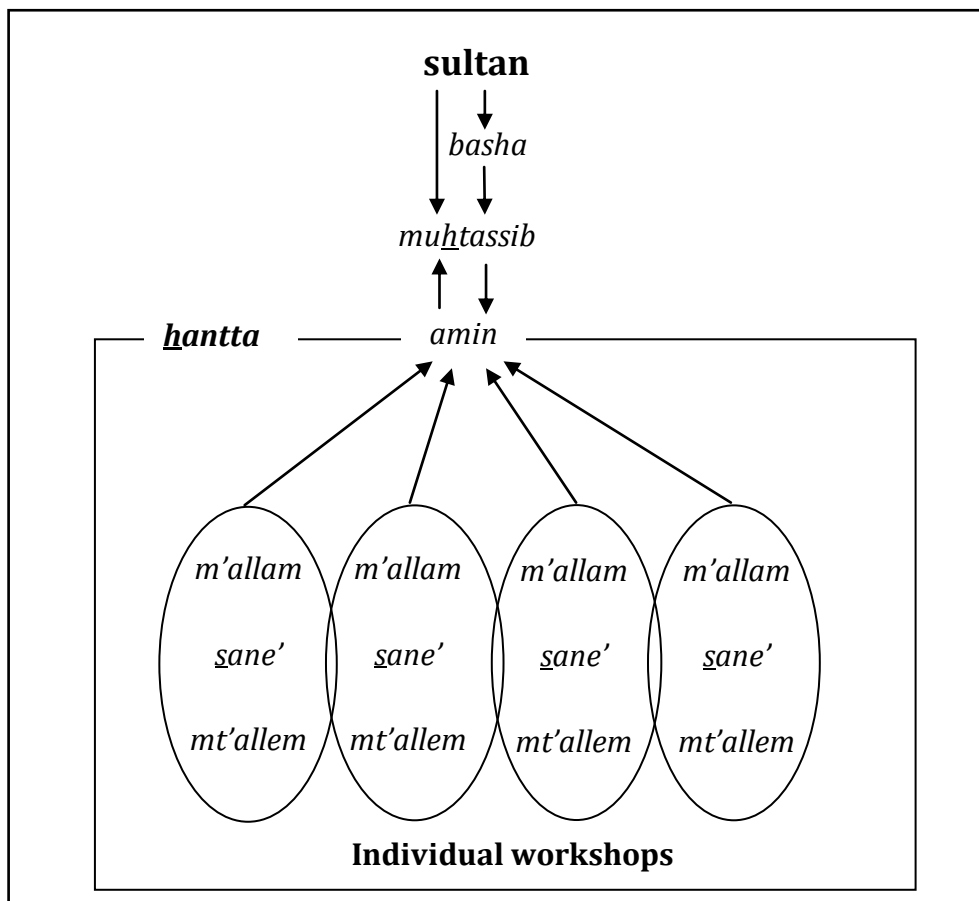


Figure 14: The traditional organization of crafts in Moroccan cities (Escher, 1986)

Urban guilds were not restricted to Fez; craftsmen in other towns were similarly organized and the number of guilds reflects the industrial diversity in a city. Tetuan can be regarded in this regard as Morocco's second industrial pole after Fez and its workshops produced the best silk embroideries and muskets in the country¹⁵.

Jews¹⁶ were particularly active in Tetuan's craft industries; they were the best metal engravers, silversmiths and tinsmiths; they too were organized into guilds. Smaller towns such as Azzemour had their share of craft production and hosted several trades each organized into guilds whose organization 'was not much different from that of other towns in Morocco' (M.S.M., 1932, p. 36).

In the early years of the Protectorate, a number of French authors thought that the Moroccan *hanтта* is the equivalent of the guilds that dominated urban crafts and trade in medieval Europe (Massignon, 1925). But these perceptions were challenged by later historians who saw the *hanтта* as a mere fraternity that lacked the cohesion, monopoly power and political influence European guilds enjoyed in the Middle Ages. In fact, entry to most trades was far from restricted and anybody with the appropriate tools could set up shop and seek customers without providing evidence for his expertise (Le Tourneau, 1949, p. 297); Cigar (1981) mentions the extraordinary story of an English renegade who settled in Fez in the late 19th century and worked as a "babouch-maker"!

Artisans in Fez were not constrained by rigorous and strict schedules; they worked an average of 200 days per year and no more than 6 hours per day (Ricard, 1924). Their work was limited to the necessities and they were willing to interrupt it to socialize with co-workers, friends and acquaintances. The typical Fez craftsman worked according to ancestral traditions and did not operate his workshop as a profit-oriented enterprise:

It is a man who is in no hurry, a bourgeois rather than a worker who does not like to get up early in the morning, an amateur laborer who refrains from work in numerous holidays, exactly like our medieval artisan (Champion, 1924).

This is not to suggest that Moroccan craftsmen did not earn profits from their workshops. Patrons who owned larger looms were in a better position to take advantage of plentiful years and earned "above normal" profits, but most of these were placed in beautiful urban constructions, in cottages or in the purchase of cottages outside the city walls. André Nouschi (1981) contrasts this situation to that of pre-industrial England where 'an important part of industrial development is due to investment by business owners who place the majority of their profits in their manufactures'. But a stagnating demand for urban manufactures never gave impetus to urban craftsmen to invest in expanding their production. Moreover, crafts are by nature labor-intensive relying on simple tools that are often made by the artisans themselves; overhead equipment that could require substantial investment was unheard of in traditional crafts.

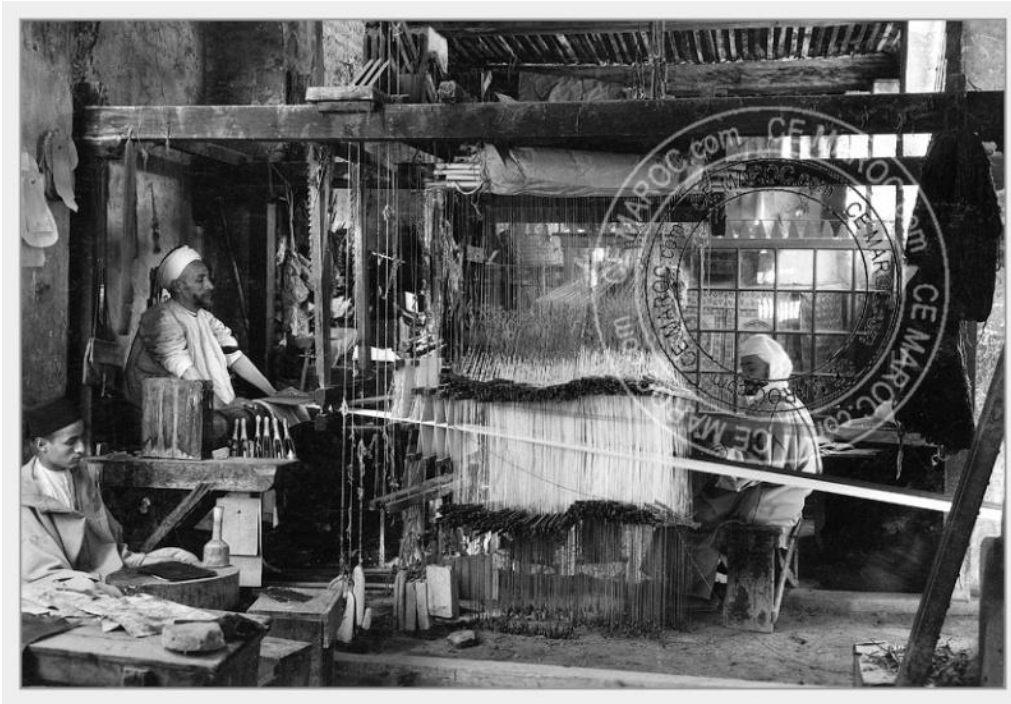


Figure 15: Weaver shop in Fez

Leatherwork and textile were the most prominent crafts in Fez since they created most of its wealth. They were transmitted from one generation to the next to form what Le Tourneau (1949) referred to as an 'industrial aristocracy'. Silk weavers (*harrara*) were the most prestigious textile crafts and their guild led the yearly procession to commemorate Moulay Idriss, the founder of Fez. With hundreds of workshops, silk weavers constituted the largest craft sector and did not falter as a consequence of increased European imports in the second half of the 19th century. On the contrary, the growth of the urban merchant class and its rise to affluence constituted a boon to silk weavers who knew how to accommodate their conservative taste (Erzini, 2006). Crafts related to construction such as masons, carpenters and woodcarvers as well as metalworkers were also prestigious but their importance was secondary. In the bottom of the social ladder were crafts related to food, such as millers and butchers; their profit margins were very small and were often occupied by rural migrants.

Women played an important economic role in the cities as they engaged, often from their homes, in textile crafts such as embroidery, tailoring garments and weaving rugs. In Fez, female master artisans (*m'allma*) were paid to teach young girls from affluent families the art of embroidery and other handicrafts as well as the social values of urban society (Rodary, 2007). Nevertheless and as in the rural areas, most women in the towns and cities were marginalized economically and often deprived of the fruit of their labor.

The signing of trade treaties with European nations and the subsequent opening of the Moroccan economy to mass-produced industrial goods precipitated the decline of urban crafts. In some cases, samples of Moroccan products were taken to Europe to be manufactured for the Moroccan market:

One should add that a number of pseudo-Moroccan objects are made in France, notably in Paris, to be sold in Morocco, especially in Tangiers, as merchandise made in the country (Frisch, 1895, p. 229).

This was especially true of the weaving industry which was the most comparatively disadvantaged vis-à-vis European imports. Only a few industries benefitted from the liberalization of trade with Europe and rug making was one of them thanks to the growing popularity of Moroccan carpets among rich Europeans.

The twin cities of Rabat and Salé historically had an important cloth weaving industry that benefited from the cotton fields on the banks of the Bouregreg; it supplied a tailoring industry that provided work for a good part of the population. But the industry was hard hit by cheaper imported cotton fabric so that a large number of artisans abandoned their trade and took up other crafts. In 1865, there were 28 cotton-weaving workshops in the twin cities but only 15 of them were operational (Miège, 1959); by 1885 they 'almost entirely disappeared [...] because of the massive importation of European, essentially English, cottons' (Brown K. L., 1976, p. 131). Wool weaving in Azzemour was also hard hit by cheaper European manufactures flooding the coastal towns starting in 1856. During the reign of sultan Abderrahman, the town's guild of weavers had 40 workshops employing 500 workers and producing one of the most renowned wool fabrics in the country; by the early years of the Protectorate, only 23 weavers were left in Azzemour (M.S.M., 1932, vol. 2 p. 36 & 41).

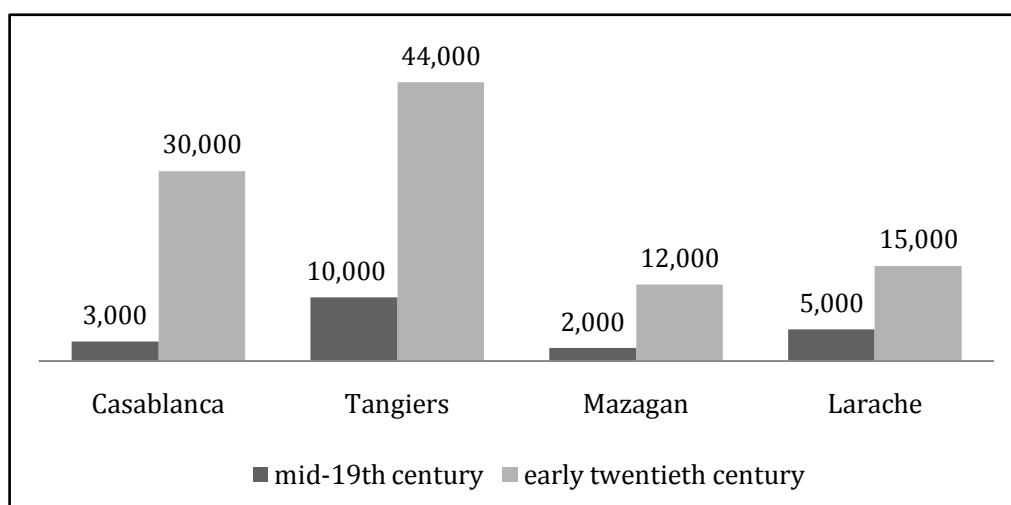


Figure 16: The growth of coastal towns¹⁷

The growth of maritime trade with Europe would also cause the demographic expansion of a number of coastal cities from which this trade was taking place, whereas inland towns would either stagnate or see their populations regress as their economic importance waned (Figure 16). Tangiers was the first to witness a demographic expansion thanks to the relief work provided by European diplomatic delegations during famines. But the most astonishing growth occurred in Casablanca who saw its population increase 10 folds from 3,000 in 1860 to 30,000 in 1906 thanks to its access to wool and cereals from the Chaouia and the settling of a number of Moroccan and European merchants.

Most raw materials used in urban crafts originated in Morocco and very few items had to be imported. Hides, wool, cactus silk, and linen were in plentiful supply. The forests of the Atlas and Rif Mountains provided lumber and charcoal in addition to tanbark for leather tanneries. More exotic products such as cotton and silk were also grown in particular regions where environmental conditions are suitable. Tadla, the Haouz and the vicinity of Rabat, among other places, were renowned for cotton cultivation¹⁸, while the vicinity of Fez and Tetuan were famous for their mulberry trees and silkworms (Erzini, 2006) (Célérrier, 1934). With the liberalization of maritime trade, Moroccan raw cotton and silk were no match to imports in both price and quality and their cultivation faltered as a consequence.

The combustible of choice in precolonial Morocco was wood and dried animal dung; coal was unknown until its introduction by Europeans in the late 19th century. Nevertheless, Morocco had several mines where iron, lead, silver, and copper were extracted, but smelting methods were rudimentary and produced metal of poor quality that was no match to its European equivalent (Colin, 1936). Sultan Hassan tried to expand mineral production using existing traditional processes, but his fear of granting concessions to Europeans prevented the modernization of the sector and the efficient exploitation of the country's considerable mineral wealth (Rungs & Salvan, 1987). With the installation of a number of mechanized flour mills in Moroccan cities, coal suddenly became a necessary commodity and its import meant additional pressure on an already deficient trade balance. A British engineer, Edward Silva, found coal deposits near Tangiers at a depth of 100 feet and a British company offered to rent the usufruct for a period of 10 to 15 years, but negotiations with representatives of the sultan seem to have faltered as Morocco kept importing coal (Ben-Srhir, 2005, p. 225).

Other attempts to modernize industries were shy and unsuccessful. In 1862, an English engineer was assigned to build a sugar refinery in Marrakesh, and in 1888 a rifle factory was commissioned from Italy to be assembled in Fez. Although both

factories started production, they faced numerous challenges such as maintenance costs, spare parts, and a lack of a qualified and disciplined workforce. Moreover, these projects were initiated by the sultan and their management was assigned to European technicians who were hired as government employees. A more detailed analysis of why these industrial ventures failed is attempted in the next chapter.

3. Fishing

Despite its long and accessible coasts, fishing in precolonial Morocco was not an important economic activity as one would expect. The abundant fisheries of the Atlantic Ocean and Mediterranean laid underexploited due to archaic fishing techniques and poor commercialization. In the coastal countryside, peasants engaged in fishing in parallel to subsistence farming and their catch was for subsistence as well, rarely reaching the market. In the Souss, Émile Laoust observed communities of fishermen and wrote about the simplicity of their vessels and fishing methods:

They venture off in good weather but without ever losing sight of the coast. Their fear of the ocean is instinctive although they never admit it. They fear in particular the south winds which can carry them away from the shore without any hope of returning (Laoust, 1923).

Along the calm waters of the Mediterranean Sea, fishing was a crucial economic activity as it supplied protein to a settled peasant population whose arid mountainous environment is not suitable for livestock raising.

Surprisingly, river fishing bore more economic importance than maritime fishing and the sultan granted fishing rights to Makhzen officials, heads of powerful *zawiyas*, or as endowments to finance religious institutions and public infrastructure (El Khamlichi, 1994). The most prized river fish was by far the shad (*shabel*), which travels along rivers from the Atlantic Ocean and Mediterranean to its spawning grounds in the interior and could reach 5 kg in weight¹⁹. In Ksar el-Kebir, fresh shabel caught in the Loukkos was sold in pairs for as much as 1.5 riyal, a substantial sum for that time (Michaux-Bellaire & Salmon, 1905, p. 316). Other common river fisheries include eel (*noon*) and mullet (*bouri*). The city of Fez, although at a considerable distance from the coast, was supplied with many varieties of fish caught in the Sebou as well as the ponds in the nearby Middle Atlas. But nowhere was river fishing more important than the estuary towns of Larache, Rabat-Salé, and Azzemour (Figure 17). In this later, river fishing provided a livelihood for over 500 fishermen operating 50 small boats; they were organized into a guild and paid 400 riyals annually for the right to catch *shabel* as it entered the Oum er-Rbia estuary:

If for any reason fishing is not undertaken in its season, all the population suffers as a consequence [...] to the point where all the merchants and the owners of public baths complain about the interruption of fishing (M.S.M., 1932, p. 34)

Salted *shabel*²⁰ from Azzemour was sold throughout Doukkala, Chaouia and as far as Marrakesh. The *shabel* season started in December and lasted four months, but once the season was over, Azzemour fishermen preferred to grow henna on the river banks rather than continue fishing in the nearby ocean.



Figure 17: River fishing in Azzemour

4. Transportation

Nothing is as revealing about a country's level of development than its transportation infrastructures; this is as true today as it was 200 years ago and precolonial Morocco was no exception. The transport of people and merchandise mirrored its economy, system of government, and level of technology. The quasi-absence of wheeled transport and the extensive use of pack animals had long exempted Moroccan dynasties from building and maintaining proper roads²¹. Renowned for their endurance, camels were used throughout the plains and desert while mules were preferred in the mountainous areas. But pack animals are slow and restricted in terms of the load they could carry. Léon Godard reported that it took four days to travel the 42 leagues (200 km) separating Fez from its nearest port town: Salé (Godard, 1860, p. 37).

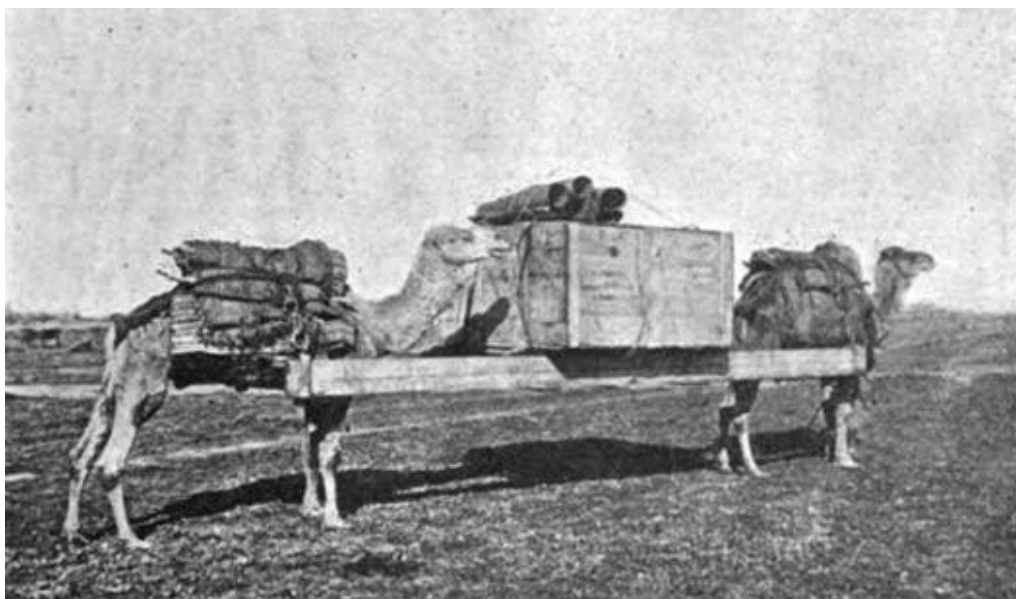


Figure 18: Heavy objects were carried by two camels

As for transportation cost, it was prohibitive that it restrained the movement of most agricultural commodities. Moreover, in plentiful years the supply of pack animals was insufficient to meet the demand for transporting the grain harvest to nearby ports, so transport prices become exceedingly high that they exclude regions that are far from the coast (Brooke, 1831, p. 174). An English traveler reported that the cost of transporting a camel load (480 lbs.) was in 1871 'at the rate of two dollar' for a journey of 60 to 80 miles (Leared, 1876, p. 289); this is at a time when a load of wheat did not exceed 3 dollars in normal times. The growth of maritime trade and the ensuing inflation caused transport prices to increase: it took 12 riyals to hire a camel for the 100-mile journey from Settat to Marrakesh (M.S.M., 1915, vol. 2, p. 319).

Transportation costs were compounded by protection fees that caravans had to pay to escorts (*zettat*) and as tributes to seditious tribes. Some of these—such as the Za'er²²—became notorious as they threatened the country's most important transport arteries and inhibited domestic commerce:

Among the many difficulties that beset commercial intercourse with Marocco, the frequent interruption of internal traffic arising from frequent petty warfare between neighbouring tribes is not to be forgotten. A merchant may purchase a quantity of produce at what appears a remunerative price; but if he be unable to have it conveyed within a convenient time to the port whence it is to be shipped, his bargain may turn out a very bad one (Hooker et al., 1878, p. 342).

This situation became more acute in the latter part of the 19th century as the Makhzen weakened in the face of mounting external debt and reduced fiscal receipts.

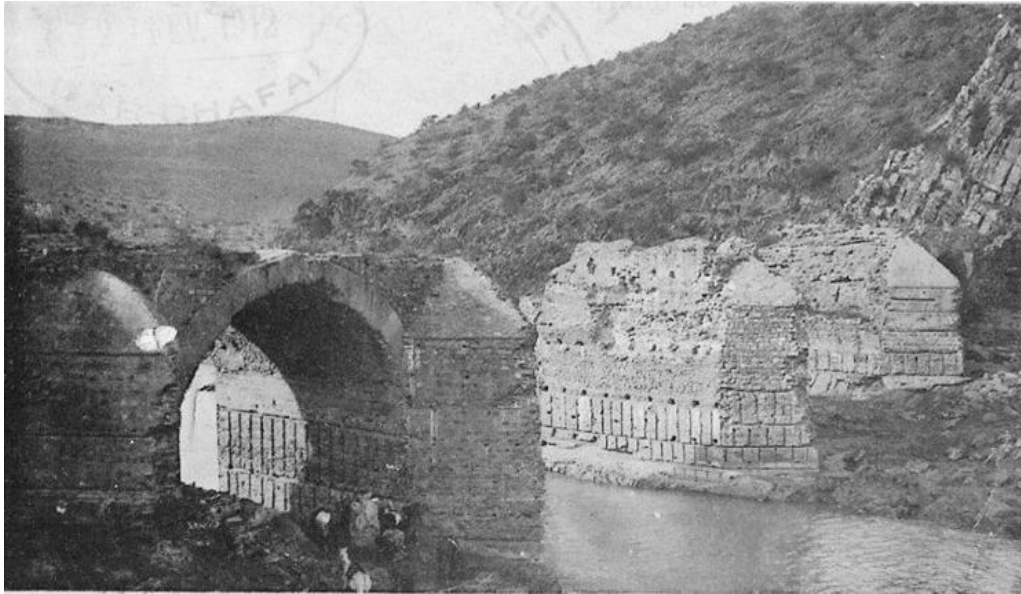


Figure 19: An abandoned bridge on the Oum er-Rbia

Bridges were rare²³ and rivers represented serious obstacles to the movements of people and merchandise especially during the rainy season. Although most watercourses could be forded, larger rivers had to be crossed using rudimentary rafts or goatskins inflated with air and covered with earth and branches. In the most frequented river crossing spots, ferrying rights were granted by the sultan to the heads of powerful *zawiyas* in exchange for their allegiance; they in turn collected fees from those operating the rafts. In one of his missions to the interior, the British ambassador in Tangier John Drummond-Hay (1848, p. 20) wrote that it took his convoy an entire day to cross the Sebou at Mehdiya. A French doctor who accompanied the sultan's convoy described the crossing of the Oum er-Rbia near its mouth: the operation took four days and 'caused the loss of numerous human lives and a quantity of beasts and luggage' (Weisgerber, 1904, p. 143).

Communications were equally bad and contributed to the mediocrity of internal trade as merchants lacked price information elsewhere in the country. In the absence of an organized postal service, private couriers (*raqqas*) travelling on foot or on horseback were the fastest option to deliver letters and carry information. In the 18th century, the Danish ambassador Georg Host reported:

Such a courier usually travels a journey of six days for 3 ducats or 30 ounces, in addition to his 2 blanquillos for his daily food. But if he prefers to put them in his pocket, he carries a bag of cooked flour and a small wooden bowl: when hungry, he pours water on a little flour, mixing with his fingers and swallowing it with appetite, which gives him vigor and lightness to run (Host, 1779/2002, p. 217).

A typical reqqas travelled on average of 60 to 70 km per day, but some exceptional messengers would travel from Tangier to Fez in a little over 2 days.

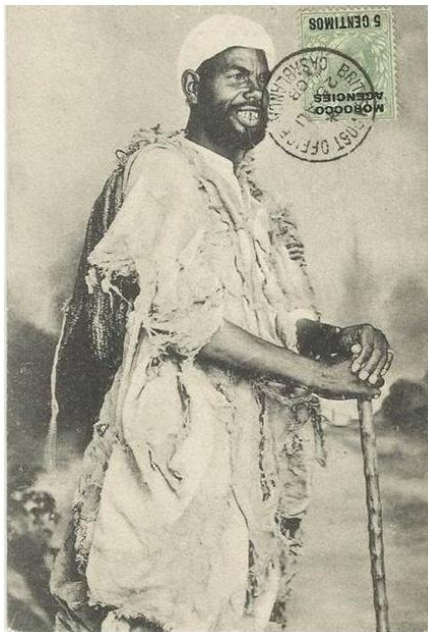


Figure 20: Reqqas



Figure 21: Lighthouse near Tangiers

With the establishment of European consular delegations in Tangiers, private couriers enjoyed an unprecedented popularity as their services became increasingly important to link the coastal city with the administrative capital; they organized into a guild and established a regular delivery twice a week. Fearing foreign penetration into the interior of the country, the sultan established a Makhzen postal service (*barid al-Makhzen a-Sharif*) and assigned personnel for the purpose of collecting letters and assigning couriers for their delivery (Michaux-Bellaire, 1911). Letters and packages were paid by the weight and the concept of postal stamps remained foreign to Morocco until the establishment of the Protectorate.

Although the sultan agreed in 1865 to allow the building of a lighthouse at the entrance of the Strait of Gibraltar (**Error! Reference source not found.**), he cared less about improving port facilities and repeatedly rejected European offers to do so. The one exception was the port of Essaouira, which was commissioned from a French engineer in the 18th century to serve as the sole trading port for Marrakesh and all of southern Morocco. The river estuaries in Rabat-Salé and Larache formed mediocre harbors as their entrance was obstructed by a sandbar that only the locals knew how to circumvent. They served as Fez's maritime outlets as well as the country's main naval bases, but their importance waned in the last decades of the 19th century with the emergence of the port of Casablanca which handled the country's most valuable

commodities: wool and wheat. Tangiers maintained its maritime primacy through its trade with Gibraltar and the presence of European diplomatic representations.



Figure 22: The port of Rabat-Salé on their shared estuary

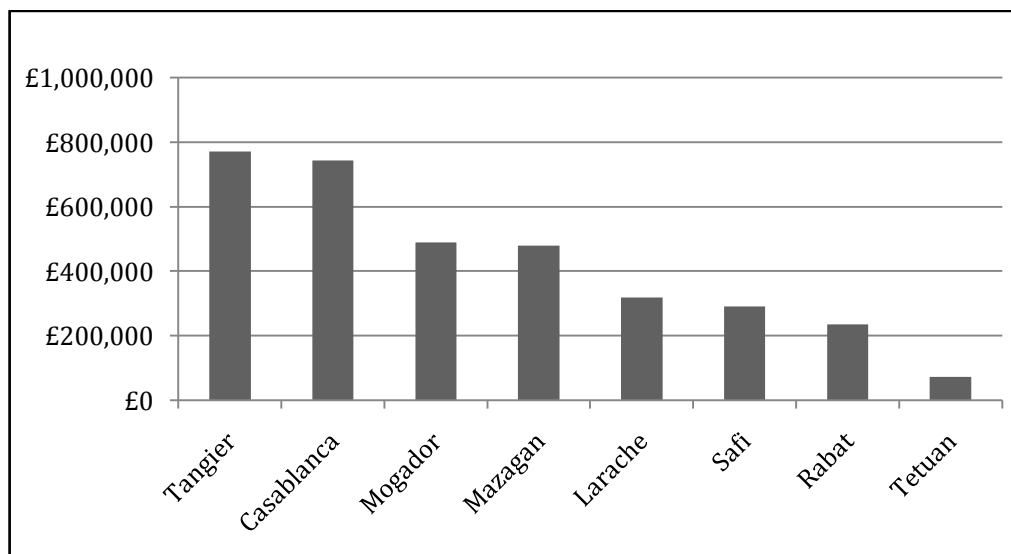


Figure 23: Major ports and their trade in 1892 (Ben-Srhir, 2006)

The Mediterranean coast remained marginal in maritime transport due to its mountainous geography and the restrictions imposed by the Makhzen to curb piracy and contraband, in which many Rif tribes engaged. Tetuan was the only maritime outlet with significant traffic, but its location on a small and silted estuary restricted the size of boats it could handle so that larger boats had to be unloaded in the sea. By the 19th century, the heavily protected Spanish enclave of Melilla became the most

important maritime outlet serving eastern Morocco (Mouliéras, 1895, p. 171). With the complete occupation of Algeria and its pacification, the newly established port of Nemours would increasingly draw more commerce from eastern Morocco.

Ever since the establishment of its first navy in the 11th century, Morocco had intermittently possessed shipyards to equip its fleet of medium and light vessels; these were established in the northern coastal towns that possessed a river estuary and a nearby forest such as Badis, Larache, Mamora and Rabat-Salé. During the 17th and 18th centuries, they supplied a “flourishing” piracy industry that preyed on European commercial vessels. In 1776, the Danish consul reported that Morocco’s pirate navy consisted of 10 frigates, the largest of which carried 45 guns, a few brigs and brigantines, but ‘these vessels were so poorly built that they rarely last more than two years’ (Host, 1779/2002, p. 137).

As Western maritime superiority had become apparent in the aftermath of the Barbary Wars (1801-1815) and the British bombardment of Algiers in 1816, Moroccan sultans had no choice but to halt corsairing activity and submit to the fact that piracy brought more retaliation than prizes. Vessels were abandoned in the estuaries of Bouregreg and Loukkos, and their shipyards were reduced to producing the few light boats²⁴ used to unload merchant ships and to cross rivers. Arthur Leared wrote the following about the demise of Morocco’s maritime power:

The Moorish navy, which in former years was respectable in the number and equipment of its vessels, has now entirely disappeared. A few brigs and gun-boats lie rotting at Salee, where the principal dockyard and arsenal were situated. But these relics of a maritime power, which no longer exist, are fast yielding to decay (Leared, 1876, p. 264).

In the absence of a commercial Moroccan fleet, European vessels dominated maritime transport ever since the country opened up its ports to trade in 1825. European navigation companies established regular lines linking Moroccan ports to Gibraltar, Cadiz, Marseille, Liverpool, Genoa and Livorno as well as Oran in French Algeria. Some companies offered to link Moroccan ports to each other through a cabotage service but the Makhzen was suspicious and preferred to maintain its control over the movement of merchandise within its territory. The yearly pilgrimage (*hajj*) became increasingly conducted through European maritime companies that offered direct links to Alexandria so that by 1848 Moroccan pilgrims ‘almost always go and return from Egypt in European vessels’ (Urquhart, 1850, p. 69).

Sultan Hassan understood the importance of possessing a modern fleet to curtail European preponderance over Morocco's external trade. He ordered a brig and a steamship from European shipyards for the purpose of combating contraband, but Morocco's maritime ambitions were hindered by high maintenance costs and a lack of qualified sailors to operate these vessels. In the early 20th century, these ships were sold for a fraction of their original price to meet the increasing obligations of the Makhzen toward European financial institutions (Miège, 1957).

5. Domestic trade

The archaism of production techniques and lack of adequate transportation infrastructure leave no room for guessing the scale of commerce in precolonial Morocco. Trade in the rural areas took place in weekly markets (*suq*) and annual fairs (*mousssem*), where peasants exchanged their produce for the few necessities they could not produce themselves. With the growth of maritime trade, the hinterland of port towns such as Casablanca, Mazagan and Tangiers witnessed an intensification of commerce in the commodities destined for export, especially cereals and wool.

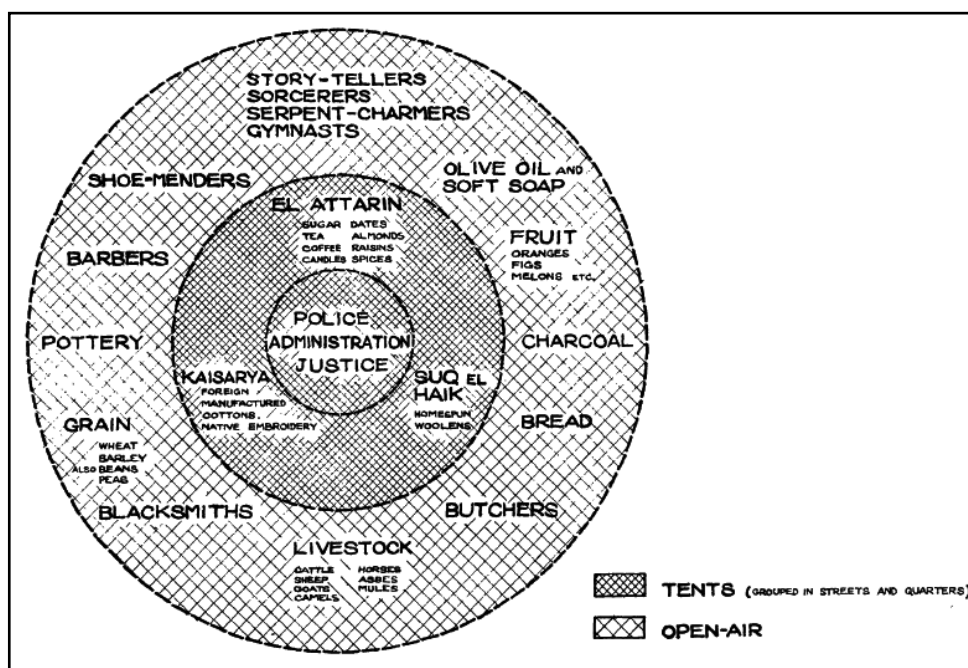


Figure 24: Diagrammatic plan of a large suq (Fogg, 1932)

The weekly market was within half a day's journey for those who trek to it; as already mentioned, the high cost and slow pace of land transportation disqualified bulky agricultural commodities from long-distance trade. The general effective radius is about ten kilometers, and rarely in excess of 30 km (Benet, 1957). The social significance of these weekly markets to the peasant is often underestimated. In

addition to buying the few necessities his household could not produce, the *suq* provided the peasant with opportunities for entertainment and recreation, as well as a source of information about the world beyond his tribe (Fogg, 1932).

In the absence of an integrated national market in cereals and other agricultural commodities, price disparities across the country were common and even widened during localized famines. These price differences were maintained by the exorbitant duties applied to shipment of home-grown cereals from one Moroccan port to another. According to Sir West Ridgway, these could reach 50 to 70 percent and were a thorny issue in the commercial treaties negotiated between the sultan and the British ambassador (Ben-Srhir, 2006). Nevertheless, in most years agricultural commodities remained cheaper than in nearby Europe suggesting a weak purchasing power from the urban population and even weaker trade links with Europe. In 1867, Aymé d'Aquin conducted a survey of Moroccan agriculture near Tangiers and provided the following information on agricultural prices:

Food Staples (francs per hectoliters)		Livestock (francs per head)	
Wheat	12 to 13	Horse	100 to 150
Barley	4	Mule	200 to 250
Maize	4 to 4.5	Oxen	65 to 100
Garbanzo	8 to 9	Sheep	13 to 15

Table 4: Agricultural prices in 1867 (Miège, 1959)

By the dawn of the 20th century these prices increased substantially as a consequence of increased maritime trade with Europe:

Food Staples (francs per hectoliters)		Livestock (francs per head)	
Wheat	16 - 24	Horse	300
Barley	8 - 12	Mule	350
Maize	7	Oxen	170
Garbanzo	15	Sheep	15

Table 5: Agricultural prices in 1913 (M.S.M., 1915)

Commerce was the realm of cities where a class of small merchants was allowed to subsist independently from the Makhzen. Larger merchants however were the sultan's protégées who benefited from trade monopolies. As with crafts, small merchants were organized in guilds (*hanтта*) to collectively deal with the *muhtassib*. Appointed by the Makhzen, the *muhtassib* oversaw all the markets in the city. He

inspected the quality of perishable products as well as the accuracy of measures. Samples of each food commodity were brought to his office (*bniqa*) every morning for examination, based on which he set their respective prices for the day. These prices were then passed to customs officers to be used as a reference for taxation; once in the market however, merchants sold their products at higher prices (Salmon, 1904).



Figure 25: A market street in Tetuan

Public auctions (*dellala*) were an integral part of the commercial life of Moroccan cities. In Fez, Louis Massignon (1925, p. 92) reported that every manufactured item had to pass by the *dellala* to be inspected for quality by the *amin* (guild's trustee) and to reveal its market price to the *muhtassib* for taxation purposes. Clifford Geertz (2003, p. 129) explains that the *dellala* was a regulating institution that helped prevent the problem of asymmetric information which exists between buyers and sellers. It protected producers, whether peasants or artisans, from those foxy merchants who were better informed about market prices, so by playing them against one another the *dellala* is supposed to reveal the fair price of the product²⁵. Each product had its *dellala* held on a fixed time and location to avoid confusion; some were held near the buyers' shops or in a *funduq* (caravansaries).

The *funduq* was also the place where travelling merchants found accommodation for his person and pack animals. The architectural structure of the caravanserais changed very little over time: an entrance that provides access to a large square or rectangular courtyard surrounded on all four sides by galleries on which open shops and rooms. The ground floor generally served as warehouses and

stables for pack animals. A water source such as a well or fountain was often placed in the middle of the courtyard (Rey, 1844, p. 62). The construction, maintenance and management of *funduqs* were undertaken by the Makhzen to encourage the supply of cities in foodstuff (El Faiz, 2000).



Figure 26: A *funduq* in Marrakesh

The secure provision of cities in foodstuff was of primordial importance and Morocco's precolonial cities had developed a whole infrastructure for that purpose. Private gardens surrounded each city to provide it with fresh vegetables and fruits, while Makhzen silos made sure the city could cope with disruptions in grain supplies. Affluent households kept private storages where cereals, legumes, olive oil and dry fruits were stored in anticipation of subsistence crises. When food prices become exorbitantly expensive, the Makhzen imports grain from nearby Spain and distribute bread for free to the needy (Michel, 1997, p. 531). Despite all the precautions, Moroccan cities were not immune from subsistence crisis and they lost hundreds of their inhabitants due to starvation and related epidemics.

Business accounting was in its simplest form and the Makhzen imposed no regulations on merchants for the conduct of their books (Salmon, 1904). There was a panoply of measurement units that varied across products, regions, and time. Gerhard Rohlfs wrote that 'weights and measures are different in almost every town in Morocco' (Rohlfs, 1874, p. 161). For example, spices were weighted using the spice pound ($\approx 500\text{g}$) which was less than the grocer pound ($\approx 750\text{g}$), while the butcher pound ranged from 750g in Larache to 1,070g in Fez. Grains were not weighted but

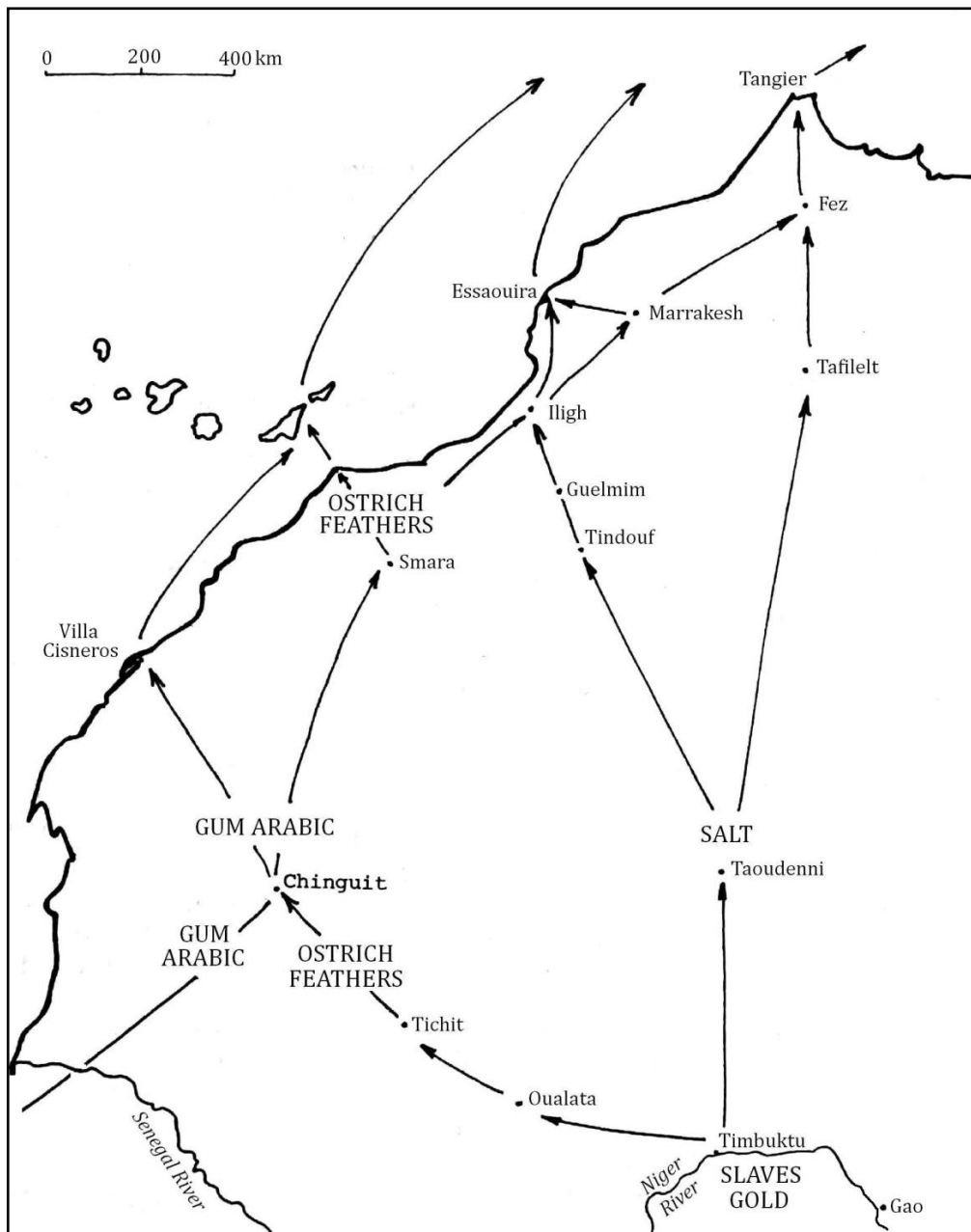
measured in volume using a metal container (*mud*), whose size varied from one region to another. If anything, the lack of uniformity in measurement unit is indicative of weak internal trade links and a government unwilling to impose a national standard by which all regions would abide..

6. Caravan trade

Historically, the trans-Saharan trade was Morocco's most important foreign trade outlet and a crucial source of fiscal revenue for the sultan. Control of the two trade routes was a decisive advantage in the political struggles between competing sultans or dynasties (Lacoste, 1974). Every year, three caravans made of hundreds of camels travelled between Morocco's pre-Saharan valleys and the western Sudan. The journey lasted up to 3 months which automatically disqualified perishable and bulky commodities; the journey was also surrounded with multiple risks such as sandstorms, lack of water, sharp variations in temperature and attacks from marauding nomads (Hopkins, 1973, p. 86). Gold, slaves, ivory, ostrich feathers, and gum arabic were the main imports, while exports consisted of locally-produced goods such as wool garments, footwear, and daggers, as well as European-made textile and firearms. Tea, sugar, and spices which were brought to Morocco by the British also figured among the exports.

The volume of the trans-Saharan trade varied according to the economic and political situations in both sides of the Sahara, and was interrupted during famines and tribal insurrections (Abitbol, 1980). Most of the trade was in the hand of Moroccan traders, especially from Fez, and there was an established colony of Fassi merchants in Timbuktu and other towns along the caravan route. Given the risks involved, the trans-Saharan trade rewarded its participants with generous profit margins. In the mid-19th century, Léon Godard (1859, p. 120) estimated three to four million francs worth of goods were brought annually from the Sudan by Moroccan merchants; regularly, he explained, the profits reached 400 percent.

Among the most prominent trans-Saharan merchants was Taleb Benjelloun (d. 1842) who amassed great wealth thanks to his close relationship with the sultan; he was appointed minister of finance and his descendants became influential members of the Makhzen as they employed their wealth in maritime trade. By the end of the 19th century, the trans-Saharan trade started to lose its economic and fiscal importance as Tripoli²⁶ became a more attractive destination for trading caravans; it would eventual reduce to a trickle in the aftermath of the French penetration into the Niger and the diversion of much of its trade to the coast of Senegal (Newbury, 1966).



Map 4: The trans-Saharan trade in the 19th century

Morocco had trade links with other countries in North Africa, especially Egypt, but this 'oriental trade' was a byproduct of the annual pilgrimage caravans. Moroccan pilgrims carried textile and leather footwear that they bartered along their way to Mecca for their sustenance, and there were established Moroccan merchant families in Tunis and Cairo to facilitate their exchange (Miège, 1962/1996, vol. 2 p. 154). One market in Cairo, al-Ghuriya, was supervised by merchants of Moroccan descent (Raymond, 1973). In the 18th century, William Lemprière (1793, p. 351) estimated 'the value of the articles contained in one of these caravans, joined with the ready money, amounts to two millions of hard dollars'. On their way back to Morocco,

pilgrims brought coffee, spices, silk and other exotic products to sell at home at considerable profit margins. With the constant fall in the cost of maritime transport, Morocco's oriental trade dwindled as an increasing number of Moroccan pilgrims traveled by sea—on European vessels—from Tangiers or Tetuan directly to Alexandria (Miège, 1962/1996, vol. 3 p. 70).

7. Maritime trade

Maritime trade was to some extent the prime stimulator of Morocco's precolonial economy and its growth would pave the way for European penetration. From a system of "administrated trade" in the late 18th century, Morocco's maritime relations with Europe expanded substantially after 1856 causing the integration of its port towns and their adjacent hinterlands into the global economy.

After the trade-friendly reign of sultan Mohammed III²⁷ (1757-1790), his devoutly religious son sultan Sliman (1792-1822) severed all trading relations with the "Christian" nations²⁸:

The prayer was performed as usual on every Friday, but the sermon was preached by one of the sultan's fakihs, who insisted with energy on the point "that it was a great sin to cultivate any commerce with Christians, or to sell or give them any sort of food or nourishment", and many other similar topics (Bey, 1816, pp. 46-47).

Sultan Abderrahman (1822-1859) reversed his predecessor's isolationist policy and renewed the commercial treaties that sultan Mohammed III concluded with the European powers. But trading with Europeans was more than a choice: substantial amounts of cereal had to be imported to alleviate the great famine of 1825. The harvests of 1829 and 1830 were excellent and Morocco was back as a cereal exporter to Europe, but the sultan wanted the trade to be under his supervision so he could reap most of its profits. He assigned for this purpose a number of experienced merchants to conduct commerce on his behalf. These "sultan's merchants" (*tujjar al-sultan*) were granted trade monopolies over particular goods and were extended generous loans; they successfully established a commercial network stretching from Manchester to Livorno. Petty traders had to sell their goods to the merchant who possessed the export monopoly of the particular good. This made the sultan's merchants in a favorable bargaining position on the purchasing side and the selling side allowing them to reap well above-normal profits.

Thanks to their effective family organization, knowledge of European languages, and financial skills, Jewish merchants played an important role in this liberalization. One of them, Meir Macnin rose to prominence as the sultan's chief negotiator with the

“Christian Powers” and managed several ports, set tariffs, made purchases for the Makhzen, and collected gifts from European consuls on behalf of the sultan²⁹. Other prominent Jewish merchants were Yahuda Ibn Shlomo Halevi from Tetuan and Abraham Corcos from Marrakech. The sultan’s preference to conduct maritime trade through Jewish merchants stems from his fear that Muslim merchants may be “corrupted” if they travelled to Europe. Nevertheless some Muslim merchants such as Mustapha al-Doukkali and Abderrahman al-Qabbaj gained the sultan’s trust and were granted trade monopolies for the export of hides and cattle from the port of Tangiers as well as concessions for mineral exploitation in the nearby Anjara mines.

The opening of Moroccan ports to maritime trade coincided with a growing European shortage in wool, of which Morocco had an abundant supply. France quickly became the largest importer and by 1834 the port of Marseille received 40,000 quintals of Moroccan wool. Cereals remained the commodity that Europeans wanted the most from Morocco but the quantities available for export depended on the vagaries of the weather. Other exports consisted of hides, almonds, beeswax and olive oil along with the exotic goods brought from the Sudan. Given the lack of financial relations between Europe and Morocco, maritime trade was carried in its most basic form; European merchants bartered their cargo with the sultan’s commercial representatives and the balance was often paid in Spanish piastres.

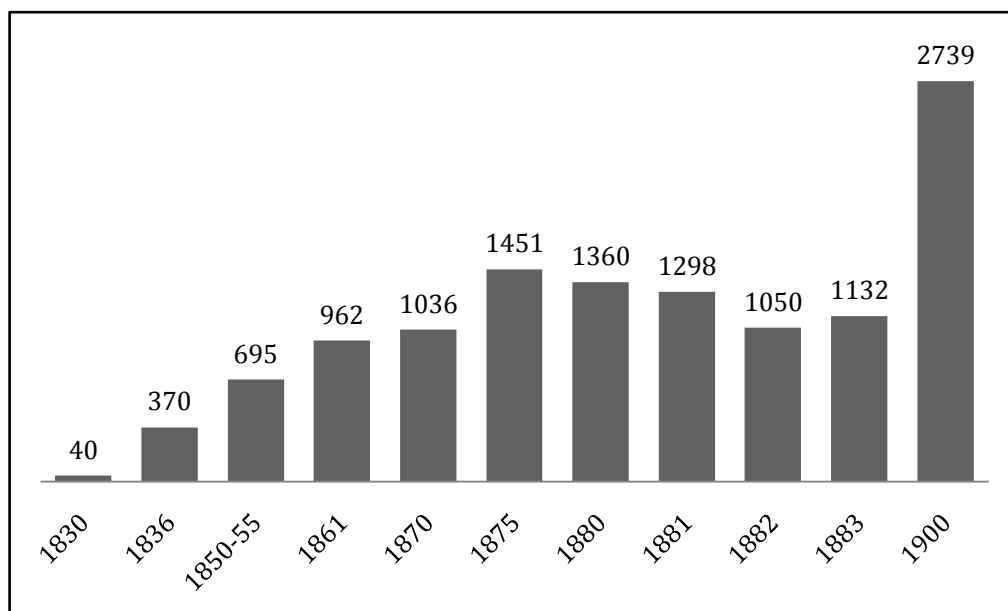


Figure 27: Commercial vessels entering Moroccan ports (Miège, 1962/1996)

The hazardous Atlantic coast, the inadequacy of Moroccan ports and the hostility of their inhabitants towards Europeans raised the necessity for an entrepôt port to facilitate trade between Europe and Morocco (Miège, 1962/1996, vol. 2 p. 86).

Cadiz played this role for grains and by 1831 one of the sultan's merchants was operating a warehouse there, but it was the port of Gibraltar that offered the greatest advantage to European merchant houses seeking to penetrate the Moroccan market (Miège, 1962/1996, vol. 2 p. 69). Moroccan Jewish merchants were first to move to the British enclave and maintained their commercial links with Morocco; they were joined later by a number of Muslim merchants.

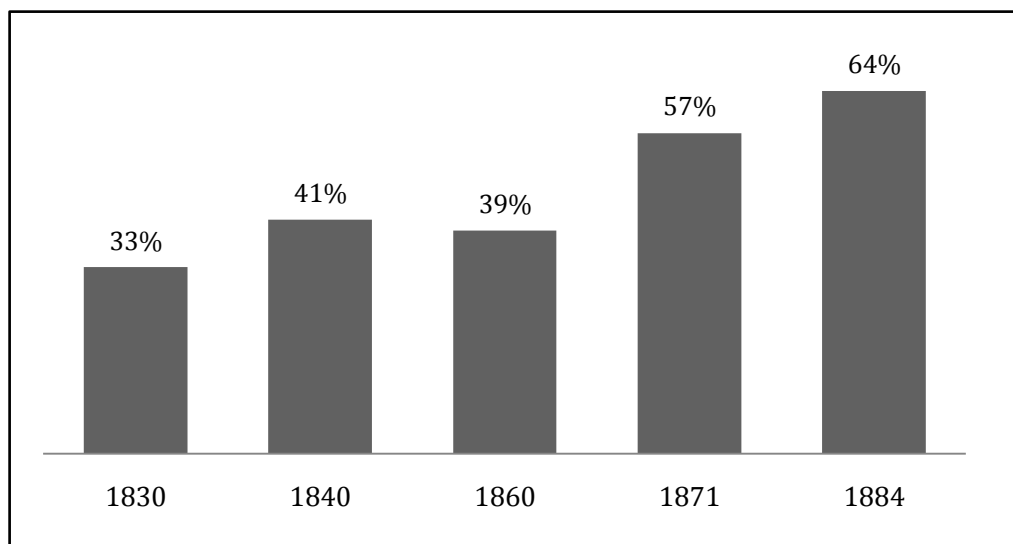


Figure 28: Share of cotton fabric in total imports (Miège, 1962/1996)

Cotton fabric was Morocco's prime import throughout the 19th century, and its share of total imports doubled from 1830 to 1884. Other manufactures such as firearms, gunpowder, steel and iron were of minor importance, while tea and sugar imports never faltered. For a culture than shunned alcohol, Moroccan appetite for the sweet beverage did not cease to increase in the 19th century. Supported by a sustained fall in prices, tea imports grew exponentially, from approximately 3,500 kg in 1830 to over 2.5 million in 1910. Despite a slower fall in prices, sugar imports rose from 250 tons in 1830 to over 3,000 tons in 1877. Sweetened green tea was to become a symbol of Moroccan hospitality, but also of economic dependence. By 1890, these two commodities represented 25 percent of imports and created a trade imbalance that drained the country of its precious metals.

Trade policy in precolonial Morocco abided by no rules or economic logic, at least from a mercantilist perspective. Exports were discouraged using exorbitant and arbitrary taxes while imports enjoyed lower rates. Wool for example was taxed at 5 piastres per quintal, which is equivalent to at least 40 percent of its market price on the coast. Because of its strategic importance, export duties on grains varied according to their abundance: in 1831, they reached 2 piastres per *mud* (56 liters)

when their price did not exceed 1.5 piastres on the coast. But this shifting export policy and the uncertainty it creates had consequences:

The permission to export corn is therefore given or withheld by sovereign order [...] It is needless to point out how much the uncertainty thus produced must interfere with the profits of cultivation (Hooker et al., 1878, p. 69).

Diane Ponasyk (1977) explained that Morocco's precolonial perception of foreign trade was standard for traditional states; a 'necessary evil' through which the sultan could acquire modern weaponry and prestige items.

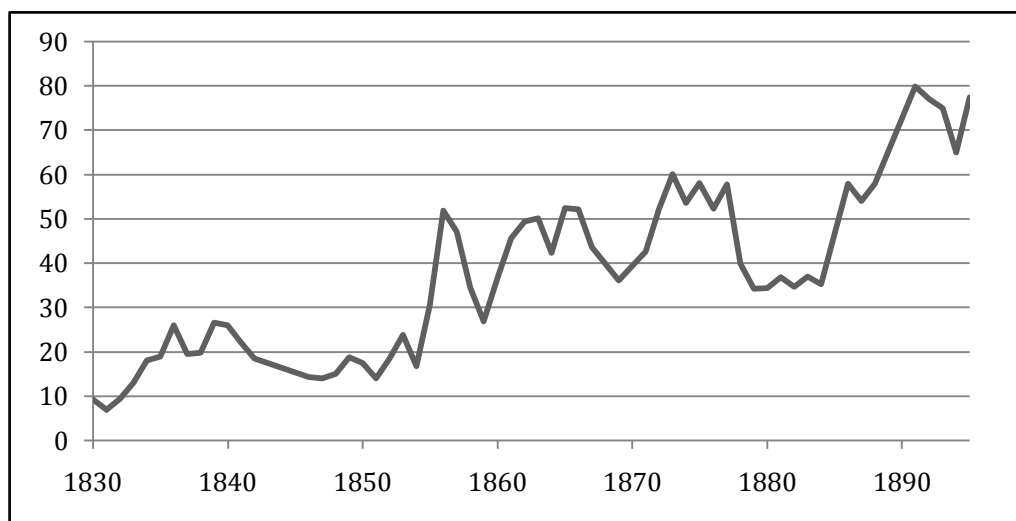


Figure 29: Value of maritime trade in millions of francs

The sultan's reasoning was more political than economic: to prevent domestic commodity prices from rising, which could engender rebellion in the cities, and to use custom duties as a bargaining tool against the European powers. Moreover, the religious establishment strongly believed that exporting to the "Christians" would embolden them³⁰, but the European powers were becoming emboldened with or without Moroccan exports, as noted by the contemporary Moroccan chronicler al-Nassiri (1894/2010, vol. 3 p. 413). The humiliating defeat in 1844 against France and the British intercession to save Moroccan integrity weakened the sultan's bargaining position and he had to make important commercial concessions that loosened his grip on maritime trade and constrained the profits he derived from his export monopolies.

The treaty of 1856 was the first major concession the sultan made to the European powers. Most trade monopolies were dismantled, and British goods were allowed in all ports and exempted from all taxes except an import duty of 10 percent ad valorem. Port duties as well as export duties were lowered and fixed, but the

sultan retained the right of banning the export of grain during droughts. The treaty recognized to British subjects the right to own property, conduct commerce anywhere in the country, and in case of litigation to be tried by their consular court. Spain sought similar commercial advantages as Britain and used its victory in Tetuan to press for them. A treaty was signed in 1861 that guaranteed to Spain the status of most favored nation and other commercial treaties were signed with Belgium in 1862, and France in 1863, but none was able to contest British dominance over Moroccan trade (Figure 30). Germany was a late comer, yet its share doubled from 5 percent in 1891 to 10 percent in 1895 thanks to an aggressive marketing strategy and the counterfeiting British manufactures favorite to Moroccans.

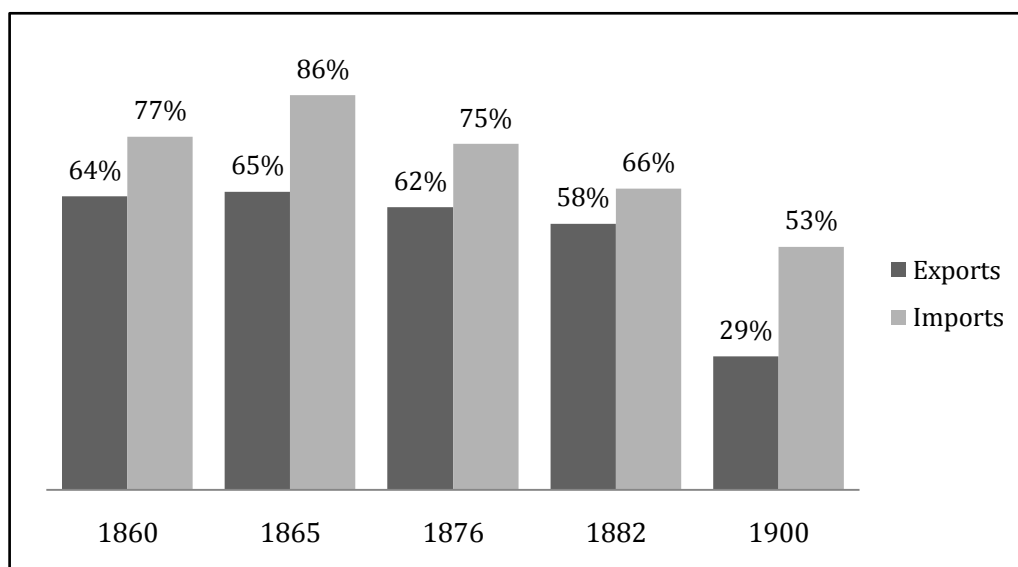


Figure 30: British share of Moroccan maritime trade

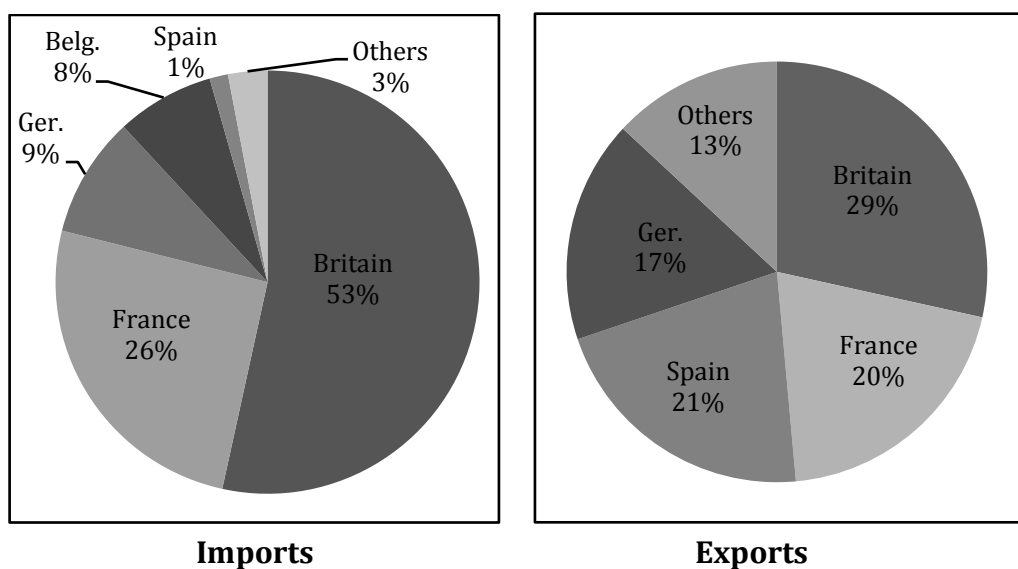


Figure 31: Origin and destination of Morocco's maritime trade in 1900

The open door policy forced on Morocco led to the quintupling of maritime trade from 9 million francs in 1830 to 50 million in 1863; the number of Europeans residing in the country grew six folds during the period. But these treaties left a controversial legacy as they paved the way for the practice of consular protection. Intended for Moroccan agents who worked for European consuls and merchant houses, the practice took a commercial aspect when protections were sold to the highest bidder. Protégées were exempted from Moroccan taxes and jurisdiction, and many of them used their status to enrich themselves unscrupulously. In some cases, consular protection became a vehicle for extorting an already impoverished peasantry and reducing it to a state of servitude:

The system has reached perfectly scandalous proportions, and calls loudly for reform [...]. The prisons are said to be full of hapless, wretches who suffer the unutterable torments of those hells upon earth because they will not, or cannot, pay what they do not owe. Harrowing tales are told of unfortunate debtors being torn from their homes at the instance of European and "protected" claimants, and driven off to languish in dungeons far from their relations and friends, who alone can relieve them and save them from starvation. Innocent men are flogged and tortured, perhaps to death, to make them confess robberies that they have never committed. It is this and similar treatment, far more than so-called "fanaticism," that has caused the foreigner to be so hated, and which makes the name of Jew and Christian to stink in the nostrils of every true believer (Stutfield, 1886, p. 209).

A notoriously famous British protégé was Boubker al-Ghanjawi; he rose from being a camel driver to one of the richest men in the country. He was accused, among other things, of falsifying property titles and evicting their rightful owners, as well as operating brothels (Biad, 2013).

Mustapha Bouchara classified protégés into five categories: (1) the naturalized were those who acquired foreign citizenship and were mostly Jews, (2) consular protégés were those who worked for foreign consuls such as translators and writers, (3) exceptional protégés were the large merchants, mostly Jews, who represented European merchant houses and were limited to 12 merchants per foreign country, (4) brokers (*simsar*) were the petty merchants, both Muslims and Jews, who travelled into the countryside to purchase agricultural commodities in the suqs on behalf of European merchants, (5) associates were those who engaged in agricultural partnerships with Europeans (Bouchara, 1984, p. 420).

The number of protégés would expand exponentially as each bestowed protection to his family members—as well as others—thus challenging the Makhzen’s authority. In a letter to one of his governors, sultan Hassan described the situation:

When hiring brokers, merchants do not abide by the [stipulated] conditions which are two brokers for those with substantial commerce and one broker for those with medium [commerce]. Instead each one of them hires eight brokers and more [...] and each broker adds to his family twenty or more families of his relatives [...] and each one of them hires fifty or sixty associates, and each associate is joined by many of his brothers, so that he intercedes between them and the [Makhzen] representative, and encourage them not to pay their dues, perform corvée work and pay back their debt (Bouchara, 1984, p. 423).

Coastal regions were affected by the system more than others given the level of economic interaction their inhabitants had with Europeans. Burke (1976-1977) estimates the number of protégés in the Chaouia in 1907 at around 10,000 out of a population of 300,000 which strained social relations and created inequality in a society not accustomed to it. In the vicinity of Tangiers, whole villages were given protection in return for services they rendered to European consuls residing in the city. Stephen Bonsal (1894, p. 265) reported the story of two of these villages, one with American protection and the other British, insisting that the American protégés sang to him the “The Star-Spangled Banner”!

Not all maritime trade went through official channels; some was conducted as contraband on the loosely governed Mediterranean coast to evade paying customs (Ayache G. , 1979). Among the prized contraband items were repeating riffles whose import was banned by the Makhzen:

It is estimated that some millions of fire-arms—a large proportion of them repeating rifles with a large supply of ammunition—are now in the hands of the people [...] Ship-load after ship-load has been landed on the coast in defiance of all authority [...] (Meakin, 1906, p. 270)

Remington riffles were the most popular guns in the Rif and their price fetched between 40 and 50 piastres, a substantial sum at the time. Consular protégés in the port cities also took advantage of their status to engage in the contraband of modern riffles and sell them to peasants as well as city dwellers including Jews (Kenbib, 1984). In the Chaouia, peasants ‘took advantage of their first savings to purchase horses and Winchesters that enabled them to rebel against the quids who exploited them’ (Weisgerber, 1907).

In summary, the liberalization of commerce between Morocco and Europe materialized over two stages. The first, from 1825 to 1844, the sultan and his merchants attempted to benefit as much as possible from maritime trade through monopolies and exorbitant duties. The treaty of 1856 initiated a second stage dominated by European merchants and their Protégées. In both stages, the urban masses suffered from increasing grain prices, currency devaluation, and cheap manufactures that ruined many craft industries. Moreover, the reduction in export and import duties dug a hole in the Makhzen's finances, and had to be compensated through a heavier tax burden on the subdued rural population, leading to an intensification of tribal unrest.

8. Money and financial services

Morocco's precolonial monetary system was chaotic and confusing, to say the least³¹. In the cities, European currencies circulated along a panoply of depreciating domestic coins while the subsistence nature of peasant communities minimized the need for money as a medium of exchange and barter was common in weekly markets, especially in remote areas³². In the 18th century, the Danish ambassador to sultan Mohammed III provided several sketches of the coins circulating in Morocco then; among the currencies two dated back to the Almoravid dynasty (12th century) and one seemed to be of Byzantine or Roman origins (Host, 1779/2002, p. 219).

Up to the 18th century, Morocco's monetary system was "tri-metallic" and consisted of four moneys of account. The *mithqal*, also known as *bunduqi* was the country's reference gold coin and weighted 3.5 grams; it was equivalent to 10 silver *dirhams* or *uqiya* each weighting 2.9 grams (in theory, at least). The *dirham* was divided into 4 silver *muzuna*, also referred to as *blanquillos*. At the bottom of the monetary pyramid were brass coins called *fels* (pl. *flouss*) whose weight varied from 3.5 to 4.7 grams; their exchange value seem to had been fixed at 6 flouss per silver *muzuna* until the reign of sultan Hassan when the whole system was radically changed to cope with the country's economic and financial realities.

As any pre-modern monetary system, official exchange rates were rarely observed and a currency's value depended on its metal content. For most of the 19th century, the international silver-gold exchange ratio was 15 to 1 but this will change in the 1870s when European countries as well as the United States ended bimetallism and adopted gold as the sole monetary standard. This caused the value of silver to regress substantially so that by 1908 it exchanged for 40 to 1. Despite this, silver coins from the World's major powers such as Britain, France and the United States maintained a value 50 percent higher than their intrinsic worth.



Figure 32: Specimen of hand-hammered coins

Traditionally, coin minting was delegated by Moroccan sultans to Jewish craftsmen who used the age-old method of hand-hammering. The hammered coins lacked uniformity and were subject to clipping and counterfeiting. Xavier Durieu (1844) wrote ‘coins are vulgarly minted and nothing is easier than modify or counterfeit them; in fact, they are all below their nominal value’. Moroccan coins were also subject to Gresham’s Law which stipulates that bad money drives out the good. This was the case of the golden *mithqal*, whose weight was prescribed by Islamic law at 4.7 grams. Such an intrinsic value made the *mithqal* undervalued compared to its official exchange rate of 10 silver *uqiya*, and it disappeared as a consequence. Morocco’s last gold coin was issued under sultan Abderrahman in 1255 hijri (1839). The golden *mithqal* would eventually cede its place at the top of Morocco’s monetary system to the silver *mithqal* whose weight was also prescribed by Islamic law at 29 grams³³; it too disappeared from circulation in favor of the lighter Spanish and French coins whose weight was 25 grams.

Starting in the 16th century and the discovery of the Potosi mine, Spain issued millions of silver coins of varying denominations. The largest was the *peso de ocho* which weighted around 27 grams at 0.93 fineness. The coin became the cornerstone of the nascent international monetary system so its name varied from country to country: Spanish dollar or piece-of-eight in British colonies and piastre in France. In 1772, a law fixed the weight of the Spanish peso to 27 grams at 0.9 fineness; the new coin became known as *peso duro* while the previous issues were referred to as *peso de plata antigua*. In the aftermath of the Napoleonic occupation, the Spanish silver coin retained its weight but was denominated into 20 *reales* instead of 8. As Spain joined

the Latin Monetary Union in 1868, the peseta became Spain's new official currency and the 20-reales was replaced by the 5-pesetas coin which now weighted 25 grams but retained its fineness³⁴. The 5-gram peseta coin and its denominations also enjoyed a wide circulation in precolonial Morocco.

The French écu was worth 5 francs, a currency that was decimalized in the aftermath of the French Revolution. The franc became the tender of choice in North Africa, especially after the French conquest of Algeria. There was also the *louis d'Or*, called *lwiz* by Moroccans; with its 7 grams of fine gold, it was jealously held by rich families and often presented as part of a bride's dowry. Despite British domination of Morocco's maritime trade, British coins were not as common as their Spanish and French counterparts³⁵; an English traveler remarked that 'English money [...] does not pass in the country' (Stutfield, 1886, p. 226).

The payment of war indemnities to Spain caused a hemorrhage of gold and silver from the country, so that by the 1860s the bulk of Morocco's species consisted of bronze coins of no value outside the country. As the silver *mithqal* ceased to circulate its role was reduced to a unit of account, and the bronze *uqiya* became the de-facto national currency and its exchange rate vis-à-vis European currencies was constantly depreciating despite exchange rate restrictions by the Makhzen:

Accounts are kept in mitcals (ducats). The mitcal is a fictitious value, which is made up of ten okeas; the ounce is divided into four mozounas; the mozouna into six flous. But commercial payments are generally made in five-franc pieces, computed at 32½ ounces each, as fixed by a decree of the Sultan. The change of the five-franc piece nevertheless ranges at times as high as 36 ounces (Leared, 1876, p. 343).

In an attempt to save Morocco's monetary system, sultan Mohammed IV issued a new silver *dirham* in accordance with the Islamic precept of 2.9 grams, but this too was clipped, sold, and melted. He also attempted to fix the exchange rate with European currencies and curb the price of food staples, but such arbitrary measures could not prevent the gradual collapse of Morocco's archaic monetary system. The chronicler al-Nassiri reported that the bronze *uqiya* lost 90 percent of its value in the span of one generation and blamed this devaluation on the 'interaction and mingling with the Europeans' (al-Nassiri, 1894/2010, vol. 3 p. 429).

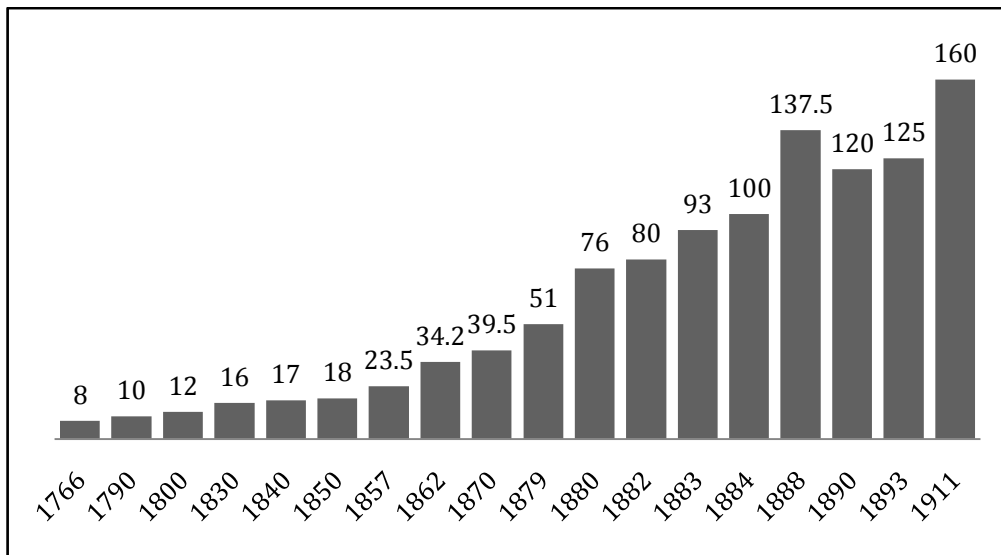


Figure 33: Value of the Spanish piastre in Moroccan bronze *uqiya* (Michel, 1997, pp. 30-32)

Exchange rates did not only vary across time, they also varied from one city to another. Given their amount of trade, port towns had more liquid currency markets than in cities in the interior or in the rural markets. Hugh Stutfield observed that the Spanish piastre was worth 90 *uqiya* in Casablanca and fetched 20 percent more at ‘fifty miles into the country’ and blamed ‘the slow and expensive means of transport’ for preventing equality of value (Stutfield, 1886, p. 226).

The liberalization of maritime trade with Europe was not the only cause behind the disappearance of Moroccan silver and gold coins. The decline of domestic mining for precious metals may have had its effect on the Makhzen’s ability to issue coins with the prescribed metal content. Moreover, starting in the 19th century gold dust arrivals from the Sudan dwindled drastically with the decline of the trans-Saharan trade further limiting the supply of gold coins.

Morocco’s first milled (machine-made) coins were commissioned from France in 1881 by sultan Hassan³⁶. Twenty million francs worth of Hassani dirhams were minted in 4 denominations: 1, 2½, 5, and 10. At 26.29 grams of fine silver, 17 percent higher than the French 5-franc coins, the 10-dirham (*riyal*) coins were snatched and illicitly exported to Europe. By 1893, the remaining Hassani coins were withdrawn from circulation and replaced by a lighter issue, but this time its silver content was equal to the Spanish and French currencies. Sultan Hassan intended for his new 10-dirham coins to be at par with the Spanish piastre and French 5-francs, but Moroccan merchants preferred the European currencies whose market values had become greater than their intrinsic values as a result of falling silver prices. Lacking a gold backing, the 10-dirham coins were exchanged according to their intrinsic value of

2.46 francs, half of their intended official value. The Moroccan currency never achieved parity with European currencies but remained stable, and even fetched a higher value in the under-monetized interior especially during harvest seasons. Meanwhile official and counterfeited bronze coins continued to flood the markets precipitating their value and escalating inflation:

The manufacture of billon coins is the subject of a monopoly granted by the emperor to individuals who flood the country with flous and impoverish it by an excessive production in the same manner as one destroys the stomach with overabundant food. The possessors of the monopoly only consult their own interest and give Morocco an indigestion of copper coins (Godard, 1859, p. 111).

Modern financial intermediation in precolonial Morocco was a very exclusive activity, in which only the prosperous merchants engaged to facilitate their transactions with European suppliers and merchant houses. This is not to say that precolonial Morocco was a society without credit. Although Islamic scripture forbade the charging of interest and promised severe divine punishment for those who 'eat usury' (Quran 2:275), Muslims devised ways to circumvent the restriction and Moroccans were no exception. One common operation consisted of the creditor selling merchandise to a debtor for future payment, then the debtor sells it right back at a discount to the creditor for immediate payment. Michaux-Bellaire (1927) related an interesting story that he witnessed in Fez around 1900 where a creditor sold sugar to a debtor on credit for 3 months at double the price, translating to a 400 percent annual interest rate.

In the rural areas, peasants whose livestock was decimated by drought find it difficult to borrow money to rebuild their flock and seeds to sow; the few who dare lend them do so at 8 or 10 percent per month (Miège, 1956). Despite such exorbitant rates, Michaux-Bellaire (1927) remarked that 'borrowers [...] not only rarely complain of being heavily exploited by their creditors, but appear instead to be grateful to them for having provided them with money when they were in absolute need for it'. The panoply of foreign currencies circulating in precolonial Morocco created more opportunities to circumvent the prohibition on usury; debtors borrowed in one currency and promised to pay their debt in a more valued currency.

There were also the traditional financial instruments of letters of credit and bills of exchange to dispense merchants from carrying large sums of money in their long distance trade (Le Tourneau, 1949, p. 288), but their fees were at the excessive rate of 10 percent of the original amount. Insurance schemes to share the risk of caravan or sea voyages were unknown:

Every captain going for an expedition far from the coast is obliged to leave a deposit or a mortgage on all his property; in case of a shipwreck, if the crew returns without the ship, the mortgaged properties are confiscated (Rey, 1840).

The lack of deposit financial services coupled with the rapacious nature of Makhzen officials left very few options to those with idle money to hoard. With the usual exaggeration, one British traveler explained the most evident of these options:

Millions of dollars lie buried by the Arabs at this moment in different parts of Barbary, especially in Morocco, perhaps half of which will never be found, the owners of them having died before they could point out their hoarded treasures to their relatives, as but a single person is usually in the secret (Richardson, 1860, vol. 2 p. 273).

With its established community of Moroccan Jews and proximity to Tangiers, Gibraltar served as Morocco's first banking center throughout the 19th century. Some of these Jews³⁷ established banks in Tangiers and other port cities to act as correspondents to European banks; their operations consisted mainly of check transfers, currency exchange, and opening deposit accounts. By 1880, European banks such as the Comptoir National d'Escompte de Paris, the Bank of West Africa, and Deutsche Orientbank established their offices there (Daoudi, 1999). The growth of Tangiers as the country's new banking center was made possible by its linking to Gibraltar by a telegraph line in 1887. Fez remained "bank-less" until the establishment of the Protectorate but was served by the French and German postal services, which provided a bill of exchange service for a modest 1 percent fee (Le Tourneau, 1949, p. 290).

The Algeiras Conference held in 1906 prescribed the creation of the *Banque d'Etat du Maroc* as an international organization whose mission is to issue banknotes and to act as the paymaster over Morocco's debt thus collecting custom revenues; in addition, the bank acted as a commercial bank accepting deposits and issuing small loans. Far from a symbol of financial modernization, the bank was the arm with which France made sure its economic interests and future colonial plans in Morocco were consolidated and unrivalled by other European contenders such as Germany.

9. Public finance

Public finances in precolonial Morocco were a reflection of its system of government: arbitrary, inequitable, and predatory. Revenues were made of a combination of taxes, duties, gifts, tariffs, and monopolies as well as confiscations. The sultan had full control over *bayt al-mal* (treasury), and spending on his palaces,

harem, and army devoured most of the budget leaving little to spend on public services and the building of infrastructure.

The core of the precolonial tax system was the two Islamic taxes of *zakat* and *'achour*. One of the five pillars of Islam, the *zakat* was initially a voluntary charity that Muslims were expected to pay willingly on their accumulated wealth at a rate of 2.5 percent. It was levied on livestock, precious metals, money, and merchandise which has been stocked more than a year. But ever since the first caliphs, *zakat* became a compulsory tax and formed an essential part of public revenues. Although not mentioned in the Quran or Hadith, the *'achour* (tithe) was instituted by the second Caliph in the 7th century and became an obligation ever since; it fell entirely on peasants at 10 percent of their harvests. The rate was reduced to 5 percent on irrigated crops; the logic was that a peasant who waters his land should pay less than the one whose land is watered effortlessly by rain. The *zakat* was paid in-kind, while the *'achour* was either paid in species or collected in-kind by the qaid.

Eventually, all taxes received in-kind ended up in the Makhzen's stores in Fez, Meknes, and Marrakesh (Aubin, 1904/2004, p. 250). The stored grains were used to alleviate the effects of famines or conceded to merchants in return for cash which was used to pay petty Makhzen officials and local garrison troops; in some cases, Makhzen officials were directly assigned to merchants who paid their salaries (El Mansour, 1990, p. 50). There was also the *naiba*, a sort of property tax levied intermittently on agricultural land to furnish the funds necessary to the sultan for his military campaigns. Its rate was left to the discretion of the sultan and his representatives, so that 'every month, every week, variable sums of money were exacted from people of the countryside under any pretext' (Michaux-Bellaire E. , 1910).

Commercial activity was taxed through market and gate duties (*meks*, pl. *mukus*), but these were highly resisted by the urban merchants and artisans as well as the 'ulama who would often declare them un-Islamic (Schroeter, 1999, p. 80). In order to gain popularity, newly enthroned sultans would often abolish them but impose them again once their authority was consolidated. The collection of market taxes was either assigned to a Makhzen official (*amin al-mustafad*) or auctioned off to tax-farmers such as when the governor of Fez purchased the right to collect the *mukus* of the city for 23,000 *mithqals*.

Jews were expected to pay a "protection" tax called *jizya* in lieu of the *zakat* and *'achour* imposed on Muslims. Prescribed by the Quran, the *jizya* had been imposed on non-muslim communities since the early years of Islam. The *jizya* was levied on the whole Jewish community residing in a town or rural area so that richer individuals

contributed more than those with limited economic means³⁸. Although its rate was arbitrarily set by the Makhzen, the *jizya* was 'very moderate' and impoverished Jewish communities were exempt from paying it (di Hemso, 1834, p. 219). With the growth of European commercial penetration in the second half of the 19th century a number of Moroccan Jews who conducted business with Europeans acquired consular protection and refused to pay the *jizya*, which meant a heavier tax burden on those Jews who were unprotected. A French consular agent in Essaouira reported that the *jizya* 'was reduced practically to nothing, as a consequence of consular protection that the principal Jews have been able to obtain, to the extreme misery of the others' (Beaumier, 1867).

In addition to taxes, the sultan received compulsory *hdiya* (gifts) offered collectively by towns and subdued tribes during the three Islamic holidays. In the major cities, craft and merchant guilds played an important fiscal role as they collected contributions from their members according to their financial capabilities, thus leveling the tax burden. Moreover, tribes and towns were expected to provide *mouna* (provision) to the sultan's *m'halla* (convoy) when he traveled across their land. Similarly, quids collected *ghrama* (penalties) on behalf of the sultan from those breaking laws or infringing on public domain. Penalties were also imposed on whole tribes or towns if they angered the sultan; al-Qadiri reported that the people of Fez had to pay substantial sums of money in reparation for angering sultan Ismail (al-Qadiri, 1772/1986, vol. 3 p. 261).

Like any pre-modern taxation system, the sultan assigned the collection of taxes to his representatives across the country. This was different from the classical form of tax farming, where a farmer would purchase the right to collect taxes and pay the king in advance. In precolonial Morocco, quids and other officials would buy their positions, and once appointed they were expected to send regular gifts along with the taxes they collected. The fact that these officials were not paid for their service leaves no room for guessing how they handled tax receipts:

The *sheikh* is assisted in his collection work by collectors called *djary*, who receive no compensation, but they do not fully submit what they receive from taxpayers. The *sheikh*, meanwhile, does not submit to the *quid* everything paid to him by the *djary*. The *quid* sends to the Makhzen a part of what he received from the *sheikhs*; court officials, who receive taxes, only submit to the sultan what they cannot keep, so that a new tax is required to fill the holes left in the previous tax, but itself opens new ones, so there always remain pretexts for extortion and harassment (Michaux-Bellaire & Salmon, 1905).

But not everyone was taxed in precolonial Morocco and tax incidence fell mostly on the small peasants in the plains. Most Berber tribes in the mountainous parts of the country refused to pay taxes, and whenever the sultan enjoyed enough military resources he would launch his army to “eat” them. There were also the aforementioned *guish* (military) tribes such as the Oudaya, Cheraga, and Cherarda who were allocated land and exempted from taxes in exchange of military service. The *shorfa* (sing. *sharif*), families that traced their origins to the Prophet, were also exempt from paying taxes and some such as the Sharif of Ouezzan acted as feudal lords collected taxes from their dominion and assigning peasants to *corvée* labor. Finally, Europeans conducting business in Morocco and their Moroccan protégés were exempt from all taxes imposed by the Makhzen as stipulated by the unfavorable treaties Morocco signed with the European powers.

The sultan could also claim private estates whose owners died without leaving heirs to legally claim them. Given the frequency of devastating epidemics in the precolonial period, this proved to be a lucrative mean to enrich the sultan and extend his economic leverage over the country. Outright confiscations were an integral part of the precolonial public finance system and the sultan used them once necessity called for them. Makhzen officials were a favorite prey; not only were their purses well full after years of public service, their removal was popular among the disgruntled peasants and townspeople (Leveau, 1977). For example, the qaidal family Ben Aouda saw its large estate in the Gharb confiscated by sultan Hassan in 1880 and given to his son Kebir (Lazarev, 1977). Hugh Stutfield explained how a qaid is left to accumulate wealth but:

As soon as he has amassed a good pile, he is called upon by the Sultan to disgorge, and the accumulations of his tyranny go to fill the coffers of the superior tyrant, unless he should chance to die under the torture, and so leave the secret of his hidden treasure undisclosed (Stutfield, 1886, p. 177).

This was the case of qaid Benabu who entrusted his monetary wealth with the British ambassador in Tangiers before leaving to Fez for summoning by the sultan; he was subsequently accused of embezzlement and was confined in a prison until his health deteriorated and died (Drummond-Hay, 1896, p. 184).

Wealthy merchants were not spared from such predations, and the sultan would “eat” them if their wealth became too obvious. The chronicler al-Qadiri reported in the 18th century how sultan Abdallah extracted up to 10,000 *mithqals* from Fassi merchants at the instigation of his mother Khnata bint Bakkar after she witnessed their wealth and prosperity during her pilgrimage (al-Qadiri, 1772/1986, vol. 3 p.

354). In 1826, qaid 'Ach'ach incarcerated two wealthy merchants from Tetuan at the order of sultan Abdurrahman and 'took from their money what his hand could reach [...] and sent all of it to the sultan' (Daud, 1959-1979, vol. 3 p. 278). Qaid 'Ach'ach would meet the same fate twenty four years later when he and his family were thrown in prison and his wealth confiscated (Daud, 1959-1979, vol. 3 p. 303).

As already mentioned, Moroccan sultans instituted a number of monopolies to benefit from maritime trade and commerce in general; these included hides, cork, sulfur, tobacco, and cannabis. Tariffs were another important source of revenue for the Makhzen, especially after the liberation of the last Spanish strongholds on the Atlantic coast in the 18th century. In principle, the rate was 10 percent ad valorem on both imports and exports, but it was constantly revised according to imperial caprice and often differed from one port town to another. Moreover, commercial vessels were charged anchoring duties in addition to a variety of other fees and "gratifications" that had to be paid to port officials.

Starting in the 17th century, protection tributes from European governments became an additional source of revenue for the sultan who promised in exchange to spare their commercial ships and crews from the predation of Moroccan corsairs. In addition to the monetary part, tributes included military equipment as well as luxury goods such as tea and textiles. Georg Host, the Danish ambassador to sultan Mohammed III, estimated the value of these tributes in 1767 at 250,000 piastres or 25 percent of total public receipts (Host, 1779/2002, p. 123). In the late 18th century and despite its apparent naval inferiority, the sultan kept receiving protection tributes and gifts from European monarchs as well as the newly founded United States. William Lemprière wrote with disgruntlement:

It has often occurred to me, that an enquiry into the state of the emperor's navy, and in particular into the inconvenience of his harbours, might be an object of some consequence to the different European powers, who now condescend to pay a most disgraceful tribute to this shadow of imperial dignity (Lemprière, 1793, p. 11).

Lemprière would have been more disgruntled if he heard how much his government paid to the sultan of Morocco during the war against Napoleon: 16,277 pounds in addition to an annual 400 pounds distributed to Tangier's Makhzen officials (M.S.M., 1921, p. 119) to facilitate the provision of Gibraltar with food. With the advent of the 19th century, the payment of these tributes regressed substantially and finally ceased in 1844 with the Isly defeat.

With such archaic and far from transparent system of taxation it is impossible to estimate the Makhzen's receipts and spending. Gerhard Rohlfs rightly remarked:

With respect to the revenue and expenditure of the Sultan of Morocco, nothing certain can be said, there being no blue books to enlighten one, and the revenue depending mainly on the caprice of the different Kaid, on chance, and other often quite unforeseen circumstances (Rohlfs, 1874, p. 223)

Some European diplomats to precolonial Morocco attempted to evaluate its public finances but these were based on nothing more than wild guessing. The first of these hypothetical evaluations was made in the 18th century by a Danish diplomat after spending 8 years in the country and witnessing a relative political stability and economic prosperity during the reign of sultan Mohammed III. Georg Host estimated the annual revenue at one million silver piastres, 300,000 of which came from port duties and 270,000 from agricultural taxes, while he placed expenditure at only 300,000 piastres (Host, 1779/2002, p. 121). Another bold estimation attempt was undertaken by count Jacopo Graberg di Hemso (1834, p. 222) during his stay in Tangiers as ambassador of Sweden.

Public Receipts		Public Spending	
'achour	450 000	Maintenance of the imperial house, harem, stables, prerogative...	110 000
Naiba	280 000	Restoration & maintenance of the palaces, imperial residences...	65 000
Jizya	30 000	Gifts and donations to Mecca, to the sheriffs of Tafilelt...	65 000
Meks	950 000	Wages of some governors and judges, as in Tetuan, Tangier...	50 000
Seignorage	50 000	Wages, clothing, and food to the army	650 000
Customs	400 000	Maintenance of the Navy	30 000
Monopolies	25 000	Wages of consuls in Europe, the Barbary Regencies, and the Levant	15 000
Rent	40 000	Courier & messengers	5 000
Fines	150 000	Total	990 000
Gifts	225 000		
Total	2 600 000		

Table 6: Morocco's public finances according to di Hemso (in thalers)

Other Europeans³⁹ provided “very rough” estimations of the Makhzen’s receipts and spending but these were either plagiarized or “inspired” from di Hemso’s figures. In 1893, Sir West Ridgway claimed he obtained from a ‘trustworthy source’ the exact amounts for the sultan’s finances (Ben-Srhir, 2006). According to him, the Makhzen collects an annual revenue of one million pounds, half of which came from customs, and provided the following distribution of spending:

Army	70,000
Allowances to 2,000 relatives and pensioners	14,000
Presents to wives and others	15,000
Household expenses	50,000
Building and extraordinaries	20,000
Total	169,000

Table 7: Morocco’s public spending according to Sir West Ridgway (in £)

There is no doubt that these figures are groundless and cannot be used to deduce any accurate conclusions; nevertheless, they reflect a very important perception Europeans had about Morocco’s public finances: the sultan and his Makhzen received far more than they spent. This is not surprising in a country ruled by a government ‘whose only concern was to collect enormous taxes to live on and to maintain the troops that allow it to demand their payment, yet having no intention whatsoever to organize the country, or to put it into production to enable it to live on its own resources’ (Michaux-Bellaire É. , 1907, p. 200).

Successive years of fiscal surpluses can only translate to a colossal treasury which European diplomats and travelers loved to speculate its value and location. The fact that Moroccan sultans never sought loans from European financial institutions helped to reinforce this perception about the accumulated wealth in the treasury (*bayt al-mal*). For example, James Richardson thought the sultan’s vault was kept in his garrison in Meknes and ‘consist of jewels, bars of gold and silver, and money in the two precious metals’ all at a value of ‘some fifty millions of dollars, and always increasing’ (Richardson, 1860, vol. 2 p. 137). Richardson figures are as credible as those of di Hemso, but the point is that the sultan did not just hoard money to be indefinitely kept in his garrison town. Substantial sums were squandered during wars of succession that followed the death of a sultan. More importantly, large sums were spent during famines to import grain from Europe and distribute it freely to the hungry (Meyers, 1981) (al-Bazzaz, 1984); al-Nassiri wrote about sultan Mohammed III and his efforts to alleviate the effects of the prolonged drought of 1776-1782:

In all towns he arranged for bread to be distributed on the poor in every neighborhood, and lent substantial sums of money to the tribes so that they distribute them on their needy [...] and he gave money to merchants to import food from the land of Christians, and ordered them to sell it at the purchase price (al-Nassiri, 1894/2010, vol. 3 p. 174)

We will never know on the extent and cost of these “food relief programs” but given the propensity of famines in the precolonial period it seems that the sultan had to constantly withdraw from his treasury to maintain peace, at least in the areas on which his authority rested.

The defeat at Tetuan and the consequent program of military modernization greatly strained Morocco’s public finances forcing the sultan to constantly seek additional sources of revenue outside the traditional fiscal channels, especially after the collapse of the trans-Saharan trade. In a letter to his representative in Tangiers, sultan Hassan urged him to hasten his efforts to develop coal mining in the region so to generate revenue for his treasury:

We have written to you many times to discover where the coal is, make a new start and begin working it in the name of the Makhzan. You are to use the steamship bought by your son and the machines that have arrived from him [...] Yet, until now you show no sign of doing this, even though you know how small are the revenues and how many are the expenses, and how urgent it is to generate income for the treasury from this and from any other source (Ben-Srhir, 2005, p. 225).

But these measures remained unsuccessful in the face of an increasing number of protégés refusing to pay taxes. The Makhzen had no alternative but to seek loans from European banks but this time it will find it more difficult to repay its debt.

The Spanish war indemnity of 20 million piastres forced the Makhzen to become indebted for the first time in its history. Spain demanded that half of the amount to be paid through the collection of customs at Moroccan ports and the other half to be advanced up front. Although the Makhzen negotiated down the initial payment to 7 million piastres, it still had to borrow £500,000 (2.5 million piastres)—at 8 percent—in the London bond market through British government guarantees in return for a quarter of custom duties (Miège, 1962/1996, vol. 2 pp. 374-381). Tetuan was evacuated in May 1862, but it took 20 years to reimburse the loan and the remainder of the indemnity.

Although it drained the treasury of gold and silver, the Spanish indemnity and the ensuing foreign loan were a “blessing in disguise” for Morocco’s public finances. According to John Drummond-Hay, the appointment of Spanish and British controllers in Moroccan ports to collect their share of customs has made the process more transparent. The British ambassador reported that sultan Mohammed told him:

[...] since the conclusion of the Convention of 1856 with Great Britain, though we pay half the revenues of Customs to Spain on account of the war debt, and a quarter, on account of a loan received, to Great Britain, yet the amount of revenue paid into the Treasury at the present time is greater than before the conclusion of that Convention, and the trade of Morocco with England and other countries has trebled in value (Drummond-Hay, 1896, p. 282).

Moreover, he repeatedly urged the sultan to reform his archaic system of taxation, and explained the virtues of a modern tax system based on remunerated tax collectors and no exemptions. The sultan was convinced at first and expressed his willingness to instigate reforms, but he faced stiff resistance from the ‘ulama who saw in these reforms as a religious innovation and a break from the holy tradition of Islam, which the sultan is expected to uphold.

A serious attempt to reform the tax system would have to wait one generation. A new universal tax on agricultural revenue, the *tertib*, was instituted in 1901 at the instigation of the Madrid Convention in 1880 to replace the Islamic *zakat* and *‘achour* as well as the *naiba*. A census was conducted throughout the country to assess taxes in proportion to property, livestock, and fruit trees each peasant owned:

In the year 1319 of the Hijra (1901) the sultan decide to undertake radical reforms; he replaced all the old taxes with the Tertib. Every tribe received the visit of an amin and 2 ‘adouls whose reponsability is to conduct an accurate census of taxable incomes. Once this operation ended, each tribe was expected to pay annual payments as follows: 2.5 douros for each yoke of two donkeys, 5 douros for a yoke of two oxens, 7.5 douros for a mixt yoke of one oxen and one horse or one oxen and a mule, or an oxen and a camel, and 10 douros for a yoke of two horses, mules or camels.

The collection of the new tax was assigned to sworn tax collectors who were generously paid. By eliminating the traditional exemptions, the tertib alienated the most powerful interests in the country: the shorfa and their zawiyas, the guish tribes, the quids, and of course the ‘ulama who wasted no time in declaring it contrary to Islam (Burke III, 1976, p. 53).

By the start of the 20th century, Morocco's public finances were in shatters as over-taxation drove a number of tribes to rebel, especially in the most productive regions of Doukkala, 'Abda and Chaouia. Moreover, wool and grain prices were significantly depressed by Australian and American competition, further reducing the Makhzen's export revenues. In 1902, the young and inexperienced sultan Abdelaziz who had a taste for conspicuous consumption and a retinue of corrupt ministers had to concede to a substantial loan from a French bank amounting to 7.5 million francs and two other loans totaling the same amount, one from a British bank and the other from a Spanish financial consortium.

In 1903, the Makhzen was incapable of meeting its financial obligation and had to secure another loan, this time in the form of bonds floated in the Paris Bourse at 5 percent interest. Of the 62 million francs raised by the bond sale, the Makhzen only perceived 48 million and most of it was used to reimburse outstanding Moroccan debt; as in the first loan the Makhzen had to cede a substantial proportion of its revenue from customs and an administration—*Contrôle de la Dette*—was established for their collection (Guillen, 1971). The 1904-loan sealed French control over Morocco's trade and finances and paved the way for its formal colonization few years later. As already noted, the 1906 Algeciras Conference established the *Banque d'Etat du Maroc* as a paymaster over Morocco. The final nail in the coffin came in 1910 in the form of a colossal loan amounting to over 100 million francs, the security of which necessitated the surrender of almost all of the country's fiscal receipts for 50 years.

10. Foreign investment⁴⁰

The loosening of Makhzen control over maritime trade in the second half of the 19th century had created opportunities for European investors especially in the port towns and their adjacent countryside. But the Makhzen's fear of possible European colonization staved off many infrastructure projects with potential to spur the modernization of the country. As I shall explain in the following chapter, the sultan turned down many proposals to established railroads to link the interior of the country to the coast, as well as a navigation company on the Sebou.

The most important form of foreign investment in precolonial Morocco was by far in agriculture. Given its status as the seat of many diplomatic delegations, Tangiers was the natural outlet for Europeans capital. A number of foreign consuls purchased farmland in the vicinity of the town and hired Moroccans to farm crops and raise livestock for their private consumption but also to export to Gibraltar. These agricultural exploitations remained limited and were authorized by the sultan to reward particular consuls for services they rendered to him. With the humiliating

defeat at Tetuan and the capitulations agreed by the sultan to European powers, the nature and size of these agricultural ventures would drastically change. More and more Europeans flocked to the country's port towns, purchased land and engaged in agricultural associations with Moroccan sharecroppers. In 1877, the qaid of Casablanca Mohammed Bargach complained that in 1856 no European was involved in agriculture, but now many have found it a lucrative business. Jean-Louis Miège remarked that European landlords did not try to improve existing farming methods; nevertheless they introduced new strains of crops that are more productive and in high demand in their home country. Early fruits were a prized export to Britain so the vicinity of port towns became increasingly surrounded with European-owned gardens supplying oranges, tangerines and apricots. Other Europeans engaged in livestock associations with Moroccan peasants, and some developed substantial flocks such as Harry MacLean, the Scottish soldier turned-qaid in the sultan's army. The crisis of 1878-1882 and the ensuing depopulation of the countryside was a boon to many European investors and their Moroccan protégés who purchased farmland for a fraction of its price as many peasants rushed to sell to feed their families.

Mining was a prized sector for European investors but the sultan resisted granting them exclusive mining concessions. The Algeciras Conference in 1906 recognized to France an exclusive economic position in the east of the country, while Spain was given similar privileges in the vicinity of its presidios of Ceuta and Melilla. Two Spanish mining companies were created in the following year: Compañía Norte Africano and Sociedad Española de Minas del Rif to exploit lead and iron mines in the Rif Mountains, while a mining cartel, Union de Mines Marocaines, was formed by major European companies with economic interests in Morocco.



Figure 34: Construction of the Melilla-Uixen railroad for the purpose of mineral exploitation

The growth of maritime trade brought the need for hotels to accommodate the traveling European merchants. As already mentioned, Moroccan cities had *funduqs* where travelers could rent a room for the night but these were far from meeting the standards of comfort and cleanliness Europeans were increasingly accustomed to. The first hotels were established in Tangiers by Spanish and French nationals, and their number grew as the city became a popular tourist destination in the late 19th century (Stutfield, 1886, p. 3). Casablanca had to wait for its first hotel until '1898 or 1899 when a brave and entrepreneurial Spanish lady known as "La Gallega" opened the first facility deserving of that title' (Weisgerber, 1935).



Figure 35: Hotel Cecil in Tangier in 1900

Private industrial ventures remained shy as they required technical expertise and substantial capital investment as well as the approval of an increasingly suspicious Makhzen. The first steam powered machines in precolonial Morocco were the flour mills established in Tangiers and other port towns; the Makhzen tolerated their presence as a measure that contributes to famine relief at times of droughts. By 1894, there were 15 foreign-owned mills on the coast and their success would spur similar industrial projects such as sawmills and oil-presses. In contrast, the interior of the country remained quasi-free of foreign investment. An oil mill was set up in Marrakesh in 1892 by a Frenchman; its oil was exported in large quantities via the port of Mazagan, but had to close two years later probably due to pressure from the Makhzen. As late as 1907, the British vice-consul in Fez estimated the number of Europeans in the interior of the country to be less than 100 and their investments were at most £50,000 (Cigar, 1981).

Conclusion

After this detailed sketch of Morocco's precolonial economic structures and major developments, what are the main conjectures that one could draw? First, prior to the European commercial penetration Morocco's economic structures were—at best—comparable to those of medieval Europe. In fact, most West European countries had by the 17th century better infrastructures, more advanced technology, more effective production processes, more extensive and intensive domestic trade, as well as institutions that free economic activity rather than suffocate it.

Second, by the dawn of the 20th century the overwhelming majority of Moroccans remained unscathed by Western production methods and economic ideas despite 50 years of commercial intercourse with Europe. Most peasants engaged in subsistence agriculture combining cereal farming and livestock raising, while city dwellers scrapped a living either in crafts or retail commerce. The very few Moroccans who managed to take advantage of the expansion of maritime trade were powerful Makhzen official and tribal notables who were able to expand their land holdings at the expense of a weakened peasantry, but also the merchant aristocracy that traditionally made its fortune—under the sultan's protection—in the caravan trade and successfully employed it in maritime trade with Europe, this time under foreign protection.

Third, precolonial Morocco was predominantly a supply-driven economy where production decisions depended on the availability of a few factors (rainfall, draft animals, seeds and working hands) and dictated by entrenched traditions; price signals, although existent, were not enough to bring about radical changes in the country's economic structures and transform it to a demand-driven economy.

Lastly and to answer Emerson's question, precolonial Moroccans produced a surplus but instead of expanding the country's productive capabilities, this surplus was mostly captured in the form of taxes and monopolies by the sultan and the parasitic Makhzen apparatus. What the Makhzen could not capture, peasants used it to import consumer goods as well as modern rifles that became a necessity in the turbulent years following the death of sultan Hassan. The imposition of heavy war indemnities in 1860 and 1904 by Spain exacerbated Morocco's surplus leakage so that by the eve of the Protectorate the country's economic structures were not much different quantitatively and qualitatively than they were in 1800.

The next three chapters draw the threads of this thesis together and determine how each of the three fundamental factors—geography, institutions, and culture—contributed to Morocco's economic stagnation in the 19th century.

Chapter 6: Geographic Obstacles to Growth

Arab and Berber families are usually large, but no natural increment could make up for the hecatombs slain in civil war, or laid low by epidemics and famine. The ruined towns and villages, the deserted hamlets, the legends of populous places where there are now no sounds save the cry of the jackal, together with the startling falling-off in the population of cities like Fez, Mekines and Merakesh, are proofs that even within the last century, or century and a half, the people of Morocco have been waning in numbers.

Robert Brown (1896, p. xciii)

The geographic constrain has been evident throughout Morocco's history. The precarious Mediterranean climate and the proximity to the Sahara desert made Morocco and the whole of North Africa susceptible to droughts and locust swarms that had, at times, caused famines and kept population growth in check.

1. A demographic paradox

There are no official data on Morocco's population prior to the establishment of the French Protectorate¹, but this does not prevent us from drawing a sketch of the country's precolonial demography². European travelers and diplomats reported population figures based on their observations of the regions they visited and second hand accounts from locals, but most of these are biased. Travelers who visited sparsely populated regions or in the aftermath of a major famine or plague tended to underestimate the country's demographic weight³. In contrast, those who visited mostly populated areas tended to extrapolate to the rest of the country and reach overly exaggerated numbers⁴. Only those who had a full appreciation of the country and lived there for a considerable period were able to produce realistic estimates. John Drummond-Hay, the British ambassador who spent over 40 years in Morocco, thought it was around 7 million (1896, p. 167). The British explorer Hugh Stutfield (1886, p. 312) embarked on a '1200 miles ride through Morocco' and witnessed the devastation of the 1878-1882 famine; he still suggested a population of 6 million at the most. Both Hay and Stutfield agreed that such figures are ridiculously small when taken into account the 'food-producing power of the country'⁵.

The first serious attempt to estimate Morocco's population was undertaken by Nestor Larras: a French officer who spent 8 years travelling the country as a military instructor. He reached the conclusion that the population of Morocco at the dawn of the 20th century was between 4 and 5 millions, but was convinced that the exact figure was closer to 4 million (Larras, 1906).

The surprising fact about Morocco's precolonial demography, as revealed by Larras and later confirmed by Noin (1970, p. 176), is above all its "irrational" distribution. The Atlantic Plains hosted 2.2 million inhabitants, roughly half the total population, despite being the most fertile region in the country and accounting for the bulk of its agriculturally viable land. With an approximate surface of 80,000 km² this translates to an average density of roughly 27 hab/km², a meager number indicative of an extensive use of agricultural space. On the other hand, the mountainous areas and the pre-Saharan river valleys had a population of 1.9 million most of them crowded in narrow river valleys and engaging in intensive forms of agriculture.

The few European travelers who ventured in the Atlas Mountains in the colonial period described rich valleys occupied by hard-working Berber peasants who carved terraces and farmed them intensively to support one of the highest population densities per arable land in the country. Harry Ward (1910, p. 203) reported after his visit to the High Atlas near Marrakech that 'this district of the vast mountain range is inhabited by a race of hardy and industrious folk, who terrace every valley, and on the terraces grow heavy, well-kept crops of corn and groves of walnut trees'. John Braithwaite (1729, p. 133) crossed the western Rif on his way to Fez from Tetuan and described 'a mighty pleasant and plentiful country, well inhabited by cottages; and the land which was like our downs in England, was every where manured'. In the coastal Rif, the Beni Ouriaghel tribe were settled peasants who engaged in irrigated agriculture in the narrow Nekkora valley coupled with a rich and varied arboriculture. The tribe was organized into 200 hamlets each surrounded with a 'thick belt of orchards and vegetable gardens, producing all fruits and all vegetables of the creation' (Mouliéras, 1895, p. 99). In the neighboring Amekrane valley, the Temsaman tribesmen were equally industrious:

The lush aspect of this fertile soil, carefully worked by a laborious and peaceful population, is reminiscent of those beautiful places in France where all [the land] is cultivated, where not an inch of ground is lost (Mouliéras, 1895, p. 104).

In the pre-Saharan river valleys, Walter Harris saw hard-working peasants devoted to their gardens of date-palms:

I saw nowhere else such attention paid to the cultivation of the soil and the date-palm. [...] The whole scene resembled more a botanical garden than a desert oasis (Harris, 1895, p. 202)

This level of attention to farming correlated with high population densities as in Askura where Harris estimated 25,000 to 30,000 souls cultivating 200 square miles all 'irrigated and under palm-cultivation' (p. 138).

Within the Atlantic Plains, population was not evenly distributed⁶. There were areas where intensive farming supported population densities exceeding 40 hab/km². But these were the exceptions as most of the Atlantic Plains were underpopulated and extensive agriculture was the norm as in the fertile Gharb plain, where only 130,000 people occupied a surface 6,000 km² (Le Coz, 1964, p. 317). In the 18th century, a British ambassador described the Gharb as 'very remarkable for its smoothness stretching itself 80 miles from the sea [...] as even as a bowling-green', and felt 'pity so much good ground should lie waste' (Windus, 1725, p. 82). A century later, another British ambassador observed when crossing the Gharb:

Our path was over undulating hills of a red sandy soil, covered with rich grass [...]. Here and there we passed patches of fine wheat and barley, the latter already in the ear. It is distressing to see this wide extent of country almost uninhabited, and its rich soil only cultivated where the wandering Arab happens to pitch his tent; yet capable, I should judge, of competing with any corn producing country in Europe (Drummond-Hay, 1848, p. 11).

John Drummond-Hay reiterated his laments in the coastal Chaouia:

I sigh to think of the word "scarcity" being ever used in this "blessed land," when such an excellent tract of country is allowed to remain a neglected waste (Drummond-Hay, 1848, p. 54).

The Habt plain north of the Gharb was no exception despite its abundant rainfall and surface water. The Spanish traveler Domènec Badia i Lebllich (a.k.a. Ali Bey) crossed the region in the early 19th century and wrote:

The sight of these fine plains, almost wholly abandoned affected my feelings the more forcibly, because I knew that in Europe and in Asia so many thousands were starving for want of land to cultivate, adequate to their population (Bey, 1816, p. 56).

Arthur Leared was no less disappointed on his journey from Mogador to Marrakesh:

Much of the soil in this great extent of country was evidently of the finest quality, and it was lamentable to see how little it was turned to account. Here and there, at long intervals, were a few fields of maize stubble, of wheat or barley still fewer [...] but throughout the whole journey not a man or an animal was to be seen at work (Leared, 1876, p. 120)

In contrast, the Moroccan diplomat to France as-Saffar was impressed to see how populated the French countryside and the level of its exploitation:

You will not see any wasted or barren land or ruined building. Whenever the soil is poor they move good soil to it from another place (as-Saffar, 1846/1992, p. 97).

The price of land in the Atlantic Plains reflects the level of its occupation. Before the Protectorate, a *zouja* (10 hectares) of cleared land was worth no more than 200 riyals in the vicinity of Casablanca and 150 in the interior. To put this in perspective, the daily wage of an unskilled laborer was 0.4 riyal so a hectare of land was equivalent to 50 days of agricultural labor: a bargain when compared to their counterparts in Europe at the time⁷.

This irrational allocation of agricultural potential poses a paradox in the economic history of Morocco, especially when we learn that during the Roman era the Gharb and northern Morocco in general were the most densely populated parts of the country. They were inhabited by sedentary peasants who were attached to their land and engaged in intensive agriculture. They combined farming with livestock and arboriculture was a pillar of their economy. Recent archeological evidence reveals a dynamic commercial and cultural exchange between the Gharb and the south of the Iberian Peninsula as early as the 5th century B.C. and the Sebou was crucial to this exchange (Callegarin, 2008). The Greek geographer Strabo (63 BC – 24 AD) wrote that there are parts of Mauretania where the land bore two wheat crops every year. The multitude of Roman settlements connected with a network of roads is evidence of a vibrant commercial exchange. Some settlements such as Thamusida and Banasa were purposely built to take advantage of the navigability of the Sebou River and its tributaries (Pujol, 2009, p. 126). Wheat, wine, and olive oil were the principal agricultural exports, and coins minted in Mauretania Tingitana bore the symbols of a wheat ear and a bunch of grapes to express their economic importance (Müller et al., 1862, p. 160). Volubilis was the largest city and its wide avenues and imposing monuments spoke of its prosperity; it housed a weavers' guild that produced garments (*vestiarii*) and Mauretanian carpets (*stragula maura*) (Besnier, 1906).

In the early Islamic period and up to the 12th century, the northern Atlantic Plains were intensively farmed. Arab geographers and chroniclers such as al-Yaqubi (d. 897), Ibn Haouqal (d. 978), al-Bakri (d. 1094), and al-Idrissi (d. 1165) insisted that Berber peasants lived in abundance, dignity and peace; they also mentioned the abundance of villages some of which were at short distance from each other (Siraj, 1995) (Picard, 2011). Some regions engaged in commercial agriculture such as linen and cotton whose production exceeded domestic demand so a substantial quantity was exported; Ceuta was in the 11th and 12th centuries the most important cotton market in all of the western Mediterranean (Tacquin, 1917). Writing about the early Islamic period, Leo Africanus⁸ described the central Atlantic Plains (Tamesna) as hosting 'forty great towns, besides three hundred castles' all inhabited by Berbers (Africanus, 1526/2010, vol. 2 p. 394). The expansion of agriculture and the ensuing commercial exchange spurred the growth of towns and their craft industries and some towns became specialized in the manufacturing of particular products and gained a reputation throughout the Maghreb and al-Andalus (Rosenberger, 1998).

Dense populations were not restricted to the Atlantic Plains; early Arab chroniclers reported settled populations engaging in irrigated agriculture in Souss, Massa, Noun, Draa and the Tafilelt. They also wrote about the multitude of towns and the intensity of commerce especially across the Sahara desert. Sijilmasa was by far the largest town of the Moroccan south in the early Islamic period and its people were known for their wealth and generosity as well as a thirst for learning. Other towns such as Tamegrout, Igli, and Noul-Lamta were of considerable importance as centers of crafts and trading hubs for the surrounding rural population but also as terminals for the trans-Saharan trade. The common use of letters of credits is a testimony for the volume of exchange and the sophistication of those who engaged in it (Meunié, 1982). On the coast, the town of Massa boasted an important maritime traffic exporting grain, sugar, and Argan oil.

2. The regression of settled life

One suggested explanation for the regression of settled life in Morocco is the advent of the nomadic tribes of Banu Hilal and Banu Sulaim in the 12th and 13th centuries. Ibn Khaldun (1377/1967, p. 284) famously compared these Bedouins to 'swamps of locust' who transformed lush farmland into pasture and precipitated the Maghreb into an environmental, economic and political crisis. More recent writers on North African history reiterated the role of these nomads in the regression of sedentary life in the Maghreb. Georges Marçais (1946) wrote that the Hilaliens 'pushed their flocks into the middle of the fields, devastated the gardens, stripped and ill-treated the country persons, and plundered the hamlets'. Others such as Charle-

André Julien (1975, p. 74), Robert Mantran (1970), Émile-Félix Gauthier (1927, p. 388) and Henri Terrasse (1950, p. 295) spoke of a “catastrophe”, a “cataclysm” and the most consequential event in the history of the Maghreb.

But the Banu Hilal entry to the western Maghreb (Morocco) was a peaceful enterprise, at least in its early stages. In fact, they were purposely brought to the Atlantic Plains to help repopulate them after a bloody episode of religious strife in the 11th century. The once prosperous and powerful Barghwatta tribe in the central Atlantic Plains (Tamesna) was annihilated by the puritan Almoravides in 1059 and their land ‘was left to be inhabited of wild beasts’ (Africanus, 1526/2010, vol. 2 p. 395). The Barghwatta Berbers were sedentary agriculturists whose intensive farming produced a surplus in cereals that supported urban life and was exported as far as al-Andalus (Vanacker, 1973). The massive loss of life led to the regression of intensive agriculture and the techniques that supported it.

The Bubonic Plague in the 14th century dealt an additional blow to settled agriculture in the Atlantic Plains as another Arab nomadic tribe, the Banu Ma’qil, moved north with their herds from the Sahara desert to occupy the empty spaces (Ayache G. , 1976-1977). Ester Boserup informed us that when population densities are reduced by wars or epidemics ‘there often seems to have been a relapse into more extensive systems of cultivation’⁹. She cites the example of Medieval Europe where permanent fields remained uncultivated for centuries after they were abandoned due to wars or epidemics (Boserup, 1965, p. 62).

After supporting an intensive form of Mediterranean agriculture by a settled Berber population, many parts of the Atlantic Plains fell to neglect and the new Bedouin tenants lacked the agricultural know-how to replicate their predecessors’ achievements¹⁰. They initially maintained their nomadic lifestyle but eventually most of these Bedouin tribes settled, at least partially, and engaged in a combination of subsistence farming and pastoralism, which allowed them to take advantage of the vast unpopulated pastures with little labor inputs. Only in few areas did a fully settled lifestyle persist or reappear as was the case in the Doukkala plain:

The soil very stony but fertile, and better cultivated than any we have yet seen. Here and there also patches of land are enclosed with walls built of stone without mortar, as our dykes in Scotland. These enclosures are well cultivated with vines, fig-trees, and prickly pears (Drummond-Hay, 1848, p. 58).

Eugène Aubin (1904, p. 75) informed us that Doukkala is rich in cereals with many villages and markets; peasants there live in permanent dwelling and dig cisterns to store rain water.

The nearby 'Abda plain was also densely inhabited by a sedentary population fully engaged in cereal farming so that 'all the land is taken; there is not a corner which is not cultivated' (Doutté, 1905, p. 180). A French traveler observed in early years of the 20th century that 'Abda 'must be considered, from an agricultural perspective, as one of the most favored provinces in Morocco' where 'no parcel escapes cultivation' (Brives, 1909, p. 202). The 'Abda were originally camel herders of Ma'qil origins who moved from the Sahara to the southern Atlantic Plains in the 15th century; nevertheless, as their numbers grew they gradually settled and took advantage of the impressive fertility of their dark soils.

In the interior, the Saïss and its adjacent plains commonly referred to as the pre-Rif continued to be intensively farmed from Roman times to this day, despite the arrival of nomadic Bedouin tribes. Being in the vicinity of Fez, the pre-Rif had always been a strategic region for Moroccan dynasties. In describing its importance, Bernard (1937) wrote that the pre-Rif is '*le coeur de l'empire, la region vitale par excellence*'. In the 16th century, Luis del Mármol (1573/1667, vol. 2) visited the region and reported that 'the land is so fertile, although not irrigated, and that all parcels are cultivated' (p. 282) while the equally fertile Tamesna is sparsely populated and its inhabitants 'only plow the land near their dwellings' (p. 139). In the 18th century, John Braithwaite (1729, p. 156) observed that 'the country about Fez is very delightful, and very much improved'. The Cherarda for example were settled cultivators and livestock played a minor role in their livelihood; they occupied a surface of 75,000 hectares of which 60,000 were cultivated with cereals and legumes in addition to their numerous orchards (M.S.M., 1918, vol. 3 p. 359). Another tribe of Bedouin origin, the Hyayna, were equally industrious and cultivated 80 percent of their land; according to Lazarev (1966), the Hyayna integrated the sedentary tradition of the Berber population with whom they came into contact in the Saïss where they were given land in exchange of military service.

The transformation from a semi-nomadic to a quasi-sedentary lifestyle was not restricted to the plains; the mountainous areas witnessed the sedentarization of a number of nomadic Berber tribes. In his seminal work on the Seksawa, Jacques Berque (1954a) explained that these sedentary and democratic people are '*monstres d'ingéniosité sociale*' capable of achieving social equity in the face of climatic precarity. Initially pastoralists, the Seksawa were pushed in the 13th century by the Merinids into the western High Atlas in an area not suitable for livestock raising. They were

constantly prevented from descending to the plains so they had to abandon pastoralism for settled farming. They built terraces and brought water to them using canals; most importantly, the Seksawa developed meticulous water-sharing institutions that were observed for generations. They lived in permanent dwellings and individual property was highly developed so that only the adjacent forest was held communally.

The success of the Doukkala, 'Abda and Saïss peasants may be attributed to a number of factors, chief among them is soil fertility. Monique Schmidt (1970) explained that Doukkala offers the peculiarity of having developed, very early on, a true and firmly established peasantry, which she attributes to natural factors:

Natural factors, especially soil, had originally influenced settlement patterns and the process of sedentarization and explain for a large part the local or even regional differences observed in the geographical distribution of the population.

Doukkala's soils are legendary in Morocco and their fertility as been praised by European visitors such as Abel Brives (1909, p. 306) who wrote that in the 'blessed land' of Doukkala 'seeds germinate just by throwing them in the air'. This was also the case in the Chaouia where settled agriculture was concentrated in the dark soils of Oulad Hariz. But rich soils could be found in sparsely populated regions¹¹; why had not they supported settled agriculture and high demographic concentrations?

Another determining factor that contributed to the success of Doukkala, 'Abda and Saïss is the fact that they are well drained and the incidence of swamps is very low compared to the Gharb. Situated in the lower basin of the Sebou River, the Gharb was especially susceptible to flooding and one of the first major projects undertaken by the French colonial authorities was to drain its swamps (*merja*). Swamps are a breeding ground for mosquito-borne infectious diseases such as Malaria, making them an inhospitable environment for permanent human settlement. Michael Russel described the Gharb as a remarkable immense plain 'covered with the richest verdure [...] formerly possessed by a thick population, but the incalculable number of mosquitoes, gnats, and other annoying insects, have compelled the people to remove' (Russell, 1835, p. 395). There is no doubt that the prevalence of Malaria was a contributing factor in the under-population of the Gharb and the persistence of the semi-nomadic lifestyle observed among the Beni Ahsen tribe which inhabit the swampy parts of the plain¹². Moreover, in the Mediterranean climate swamps are the optimal environment for raising cattle, as they provide an almost inexhaustible all-year source of water and pasture.

The constant movement of populations was another factor that prevented the entrenchment of sedentary life in many parts of the Atlantic Plains. The recurring state of anarchy that plagued Morocco since the 16th century constrained many groups to move, either voluntarily or forcefully, from one region to another. The sudden movement of populations must have had detrimental effects on agriculture even if the displaced population possessed advanced farming skills as were the Berbers of the Atlas Mountains who engaged in intensive farming on the little arable land they had access to. Once they descended to the plains, the abundance of land released these populations from the burden of intensive farming to less demanding forms of agriculture because the returns to labor are far higher with extensive farming. Ester Boserup described a similar process in Latin America where the European settlers, who came from agriculturally advanced societies, switched to extensive forms of agriculture as a response to their sparsely populated new environment (Boserup, 1965, p. 52). In the fertile Great Plains of the United States, the Canadian Prairies, and Argentina's Pampas, European settlers preferred raising livestock. Only until the introduction of machinery that cereal production became an attractive crop and these regions subsequently became the granaries of the World.

3. The consequences of the regression of settled life:

a) Predominance of extensive forms of agriculture

The most immediate consequence of the decline of population densities is the regression of intensive farming and its optimal use of agricultural resources. As population densities dwindled in the Atlantic Plains, the abundance of land relieved peasants from the back-breaking burden of intensive agriculture. This had led to the emergence of extensive systems of farming that combine short-fallow farming with livestock raising, which enabled them to take advantage of the available space with their limited labor resource. The increased propensity of famines and epidemics in the 18th and 19th centuries had further reduced the areas under intensive agriculture. Even after the establishment of the French Protectorate in 1912, under-population would remain an obstacle to the development of the rural sector. François Bernard (1917, p. 151) estimated that no more than 2 million hectares were permanently farmed in the early years of the Protectorate out of a potential of 10 million; pointing to a great opportunity for colonization, he asks if 'the country will provide the necessary workforce to exploit these available 10 million hectares?'

Take the example of the Mediouna tribe whose land is adjacent to Casablanca. With the advent of the French Protectorate, their population was estimated at only 9,000 peasants occupying a substantial territory of 450 km² despite the fertility of its soils and the abundance of water in the form of shallow wells (M.S.M., 1915, vol. 2, p.

15). With such a feeble population density, the Mediouna had no choice but to engage in extensive agriculture combining cereal farming and livestock raising to fully utilize their territory. Thus, every year vast tracts of their land were left as common pastures and only a fraction was plowed to grow cereals; irrigated farming was restricted to few places to supply Casablanca and its burgeoning population with fresh vegetables.

Such use of agricultural resources required the least amount of labor but when taking into account the amount of land used, it is the least productive. Boserup (1965) explained that peasants do not voluntarily make the transition from extensive forms of farming to a substantial reliance on continuous cultivation, until population increases force them to apply more of their labor to produce enough to feed their entire household. Such demographic pressures were inexistent in most of the Atlantic Plains given the recurring episodes of famines and epidemics as well as the state of anarchy and bloodshed that the country occasionally fell to.

The peasant's reluctance to engage in intensive farming to produce more calories—in the form of cereals and legumes—per unit of land can be explained by the difference in marginal productivity of labor between farming and livestock raising. Livestock raising necessitates little labor effort in open plains, especially if water is available in the form of rivers, swamps or easily accessible wells; its marginal productivity of labor effort is diminishing but at a lesser rate than cereal farming. Faced with the tradeoff, peasants would apply their labor effort in farming cereals to the point where its marginal productivity is equal to that applied to raising livestock¹³. Peasants would start farming the most fertile soils—such as the dark tirs—and gradually move down to less fertile soils as long as they yield a higher return than livestock raising.

Figure 36 represents a simplified version of Boserup's model¹⁴ where a peasant household—operating in a subsistence economy—allocates its total agricultural labor (TL) between livestock raising and cereal farming. On the right vertical axis is represented the marginal productivity of labor for raising livestock (MPLRL) and on the left axis is the marginal productivity of labor for farming cereal (MPLFC). The peasant can choose between two methods of cereal farming: extensive or intensive. With the extensive system of farming the peasant household would apply TH1 labor to farming cereals and H1L to livestock raising. If the intensive system is adopted, then more labor hours will be devoted to farming (TH2) and consequently less to livestock (H2L), thus increasing the cereal output at the expense of a lower production of meat and the indispensable wool for household craft. This translates to a higher calorific yield per hectare than in the extensive system.

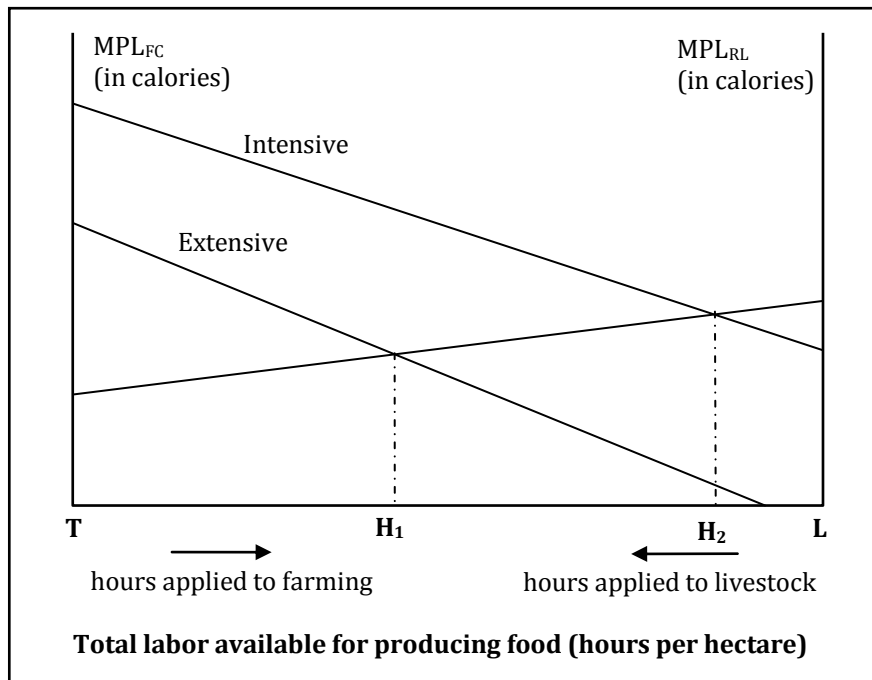


Figure 36: Boserup's model for agricultural intensification

The question is thus why did peasants in many parts of the Atlantic Plains prefer an extensive system of agriculture over a labor-demanding system dominated by cereal farming? The answer lies in the difference between the income elasticity of demand for cereals on the one hand and that of livestock products on the other. Cereals and other subsistence crops such as lentils and beans were—and still are—inferior goods so their income elasticity of demand is rapidly declining as the peasant household achieves a subsistence minimum; once this minimum is met, peasants would prefer to acquire more livestock products which have income elasticity of demand greater than one. In other words, if extensive farming is capable of producing enough cereals to meet his family's subsistence needs, the peasant would prefer it over an intensive system as it enables him to allocate more of his labor hours to livestock raising from which he could derive meat, milk and wool. In medieval Europe, the income inelasticity of demand for cereals was partly overcome through its transformation to beer¹⁵, so there was always an incentive for peasants to expand their cereal production especially in the north western region where grape growing was impossible.

One would add also that livestock raising is not a physically demanding activity and peasants would always prefer it over farming and its grueling chores, many of which fall during the heat of the summer. But most importantly, livestock gives peasants the possibility of exploiting nearby ecological areas such as forests and scrublands that are not suitable for farming yet provide a reliable source of grazing

for livestock even during droughts. In fact, some endemic wild weeds such as *avena fatua* (wild oats) are very drought-resistant and may even thrive when rainfall is low. This had made agro-pastoral peasants more resilient to the vagaries of the weather as they were able to reconstitute their flock and provide for their families once the drought is over much faster than if they were solely relying on cereal farming, which necessitate seeds and well-nourished draft animals to pull the plow. Grigori Lazarev eloquently summed up this point:

Pastoralism, whatever the time, is socially and economically more "profitable" activity than [settled] agriculture. The growing herd accumulate [to its owner] wealth beyond comparison with that obtainable with agriculture. Pastoral farming is associated with a sense of mobility. So it is possible to take advantage of complementarities from different environments, an option that is especially valued when dealing with permanent climatic risks. Mobility also gives the group better options when it comes to defending themselves. The sedentary farmer does not have the same range of choices in the aftermath of a bad harvest or when involved in an armed conflict. But also pastoralism is attractive because it is associated with a collective power (Lazarev, 2013, p. 368).

Given these facts, only when population grows to the point when extensive farming is incapable of feeding the peasant family that it will be willing to forgo livestock raising and apply more of its labor into cereal farming to extract more food calories per unit of land and seek to intensify their farming methods through the use of irrigation. This was the case of the narrow mountain valleys where population growth was sustained thanks to the difficulty of epidemics to spread in mountainous regions. With growing population pressure the agro-pastoral lifestyle had to be abandoned for settled farming. Terraces were built and water was brought to them from small dams using canals; most importantly, the Berber tribes of the Rif and Atlas mountains developed meticulous water sharing institutions that were observed for generations. In 1871, a group of British botanists visited the western High Atlas and reported that they 'were struck by the proofs of native industry and skill given by the numerous irrigation channels such as one sees in Piedmont, and in the tributaries of the Rhone valley in Switzerland' (Hooker et al., 1878, p. 196).

Again this is a simple model that does not account for the possibility that peasants could sell their surplus cereal to non-food-producing city dwellers or foreigners without depressing prices and in exchange for urban-made manufactured goods or imported luxuries, all of which have a high income elasticity of demand. This

was the case of the Doukkala plain starting in the late 15th century when the Portuguese extended their mercantile interests from their coastal strongholds of Azzemour, Mazagan and Safi. The Portuguese relied heavily on cereals from Doukkala to supply their forts and trading posts along the African coast; this increased demand led to an expansion of land under cereal cultivation, a stimulation of interregional trade, and the emergence of an extensive “putting-out” system for the manufacture of wool garments destined for the African market (Boucharb, 1984, p. 306). Vincent J. Cornell (1990) argued, with some exaggeration, that during the Portuguese mercantile domination ‘Doukkala was more prosperous than it had ever been previously or would be in the future’. There is also the possibility that intensification comes as a reaction to confiscation of agricultural surplus by a central government or feudal lords. During the reign of the Sa’di dynasty, the Haouz plain surrounding their capital Marrakesh witnessed an intensification of agriculture and substantial investment in irrigation to feed the reviving city and its growing government apparatus (Pascon, 1977, p. 75).

The preference for leisurely economic activities was also evident in the exploitation of the country’s aquatic resources. Spoiled by abundance, Moroccan fishermen remained archaic in their tools and methods and were never constrained—or lured financially—to improve them. For despite their rudimentary gear and vessels, precolonial fishermen were capable to catch enough for their family’s subsistence and most lacked access to a permanent market that could absorb their excess catch. In his interesting study on maritime life in Rabat and Salé, Louis Brunot (1921) described fishermen there as indolent and fatalist for their contentment to fish for shad in the Bouregreg estuary rather than venture in the mighty ocean. The question Brunot failed to ask is why would fishermen risk their lives sailing in the hazardous ocean if their additional catch would only depress fish prices?

b) Subsistence ethic

Given the amount of land available to them, peasant communities were capable of producing most of their basic needs: grains, legumes, vegetables and animal products. The small surpluses that occasionally occurred were either stored in underground granaries or exchanged in the weekly market for the few necessities that the peasant household could not produce. The resultant subsistence economy engendered a high degree of interdependence between peasant families within a community and strengthened tribal bonds through a number of social arrangements that promote food-security over the monetary gains commercial crops could earn. A French captain who crossed the territory of the Za’er and Zemmour tribes wrote that:

[...] they only seek to reap what is needed for food for a year and seeding for the following year. Being far from towns and rarely attending markets, they never think of taking advantage of the surplus grain that remains in the silos for the vagaries of the weather, or the more serious danger of the sultan's army. Thanks to their simplicity and their lack of need, a few quintals of wheat are enough for each family [...] We can say that they do not engage in any commerce. They are content to sell at very long intervals an ox or a few sheep to obtain a gun or a dagger, the only objects for which they would consent to spend some money (Leguay, 1887).

This entrenched "subsistence ethic" was a major obstacle to the commercialization of food production and the emergence of regional specialization in crops that, although they jeopardize subsistence, are more suited than cereals to a region's natural endowments. Droughts had always been part of the recent memory of precolonial peasants so it was rational for them to follow the "safety first" principle suggested by James Roumasset (1971) in his study of rice farmers in the Philippines. In his choice between subsistence and commercial crops, the peasant would prefer to minimize the probability of not having enough grain to feed his family over maximizing the average return on his land and labor. This does not imply that precolonial peasants were blind to innovation whether in adopting better seeds, new crops, or farming tools. In fact, precolonial peasants are documented to have had the willingness to adopt new crops such as maize and potatoes as long as there are substantial gains at little or no risk to subsistence security (Michel, 1997, p. 148). What the "safety-first" principle implies, however, is that there is a defensive perimeter around subsistence practices within which risks are avoided and outside of which a market calculus of profit prevails.

c) A disintegrated national market

In addition to the "subsistence ethic", there were other barriers to the commercialization of agricultural crops in precolonial Morocco. First the sparsely populated plains made the transportation of bulky foodstuffs uneconomical over long distances. Although transportation costs, in terms of tonnage per distance, may have been only slightly higher in precolonial Morocco than in pre-industrial Europe, they were much higher when taking into consideration the number of consumers served because of the low population density. One way to overcome this handicap was the organization of weekly rural markets that draw peasants from a perimeter of 20 to 30 km. These markets would become an essential economic, social and political institution in rural Morocco, but they never developed into real centers of trade that

compete among each other to attract more business from the surrounding countryside. They remained ephemeral gatherings that took place in open fields to satisfy the limited commercial needs of the peasantry.

The effect of low population densities on commercial exchange was compounded by the lack of proper roads that facilitate the transportation of foodstuff. As already mentioned, pack animals were the exclusive mean of carrying people and merchandise while transport infrastructures such as roads and bridges were severely deficient. William Lemprière had the following to say about the conditions of transport in the country:

The Moors have no idea of making high roads, or repairing those which have been formed by the ancient possessors of the country [...] Indeed, they are even incapable of comprehending the simple fact,— that by improving the roads travelling would become more expeditious, and less expensive (Lemprière, 1793, p. 107).

This is not to suggest that the Makhzen was incapable of undertaking large infrastructure projects. Since the time of the great Berber Empires, Morocco witnessed the building of considerable structures for military purposes and irrigation. The 93-kilometer-long Ya'qubiya aqueduct was built by the Almohads to bring water from oued Lakhdar to irrigate fields near their capital Marrakesh. The Sa'dis in the 16th century were also renowned builders of canals in the Souss, Draa and Haouz. But transport infrastructures must not be provided exclusively by governments. In medieval Europe many bridges and highways were the product of private and communal initiatives that were encouraged by the Church by issuing indulgences to those contributing with their money and labor (Harrison D. , 2004); in his work on France's medieval bridges, Jean Mesqui (1995) explains that starting in the 11th century 'the construction of a bridge was considered as a work of piety exactly in the same level as [building] a church'. An interesting question that must be addressed in the economic history of Morocco is what role, if any, did private or corporate endeavors play in providing transport infrastructure.

One possible answer is that transport infrastructures—particularly bridges—are only economically viable when population densities can support the initial labor investment to build them and repair them as they deteriorate. But how would one explain that the twin cities of Rabat and Salé were never connected by a bridge in the precolonial period although their combined population exceeded 40,000? Possibly, bridges threatened the livelihood of owners of ferry barges who would be inclined to resist its construction. A. Rey (1844, p. 59) observed a hundred of these barges 'busy from morning to dusk transporting merchandise and people whose flow is continual'.

Another possible answer is that Islamic texts, namely the Quran and the Sunnah, do not contain emphasis on charitable work to build bridges and improve roads although there are passages that enjoin believers to build mosques, dig wells and remove hazard from the road. This stems from the fact that Islam was conceived in a desert environment devoid of rivers and where the construction of roads and bridges makes no economic or military sense.

Another interesting question is whether the lack of proper transportation infrastructure inhibited commercial activity in the countryside, or the weakness of commercial activity never created the impetus for investing in such infrastructure? To answer this question it is useful to turn to the role of rivers in Morocco's precolonial economy. River transport was a crucial element in the exploitation of the country's agricultural produce during the Roman domination as it provided a cheap and reliable mean for transporting bulky agricultural commodities such as wheat, olive oil, and wine. As already mentioned, a number of Roman settlements were established on the Sebou and its tributaries to take advantage of its navigability; the Roman geographer Pliny the Elder (d. 79 A.D.) described the river as '*magnificus et navigabilis*'. The use of the Sebou as a waterway continued in the early Islamic period into the Late Middle Ages as reported by a number of Arab chroniclers¹⁶. A fourteenth-century Moroccan chronicler wrote in his history of Fez that among the advantages of the city is its proximity to the Sebou 'on which small boats could sail from the ocean to its confluence with oued Fez' (al-Jaznai, cir. 1360/1991, p. 37). He also mentioned the establishment by the Almohads of a shipyard near Fez to supply rowing-vessels that would sail down the river to launch attacks as far as Tunisia. To the north of Sebou, the Loukkos river was used as a waterway up until the Late Middle Ages and the city of al-Basra was a prosperous fluvial port from which boats sailed to Andalusia (Picard, 1997, pp. 231,383) (Ettahiri, 2004). The Oum er-Rbia also provides potential for navigation in its lower course (Weisgerber, 1902) as well as the Moulouya in the east of the country (Cousin & Saurin, 1905).

But starting in the 16th century the role of these rivers as waterways is no longer mentioned by Moroccan chroniclers or European travel accounts. This indicates the extent of commercial relations within their respective basins. If these relations were substantial these rivers would have been exploited to transport bulky product given the cost advantage river transport has over land transport. A number of European travelers lamented the unexploited potential of the river and seem to all agree that indolence was to blame for the wasted opportunity. In the 16th century, Luis del Marmol described the Sebou as:

[...] extremely wide at its mouth and capable of receiving large vessels & one could navigate it to Fez. If the inhabitants of this country were good-minded people they would only pay half for the grains brought to them on land from Azghar (del Mármol, 1573/1667, vol. 1 p. 19).

In the early 19th century, James Grey Jackson argued that:

if there were any encouragement to industry in this country, corn might be conveyed up the Seboo river to Fas at a very low charge, whereas it is now transported to that populous city on camels, the expense of the hire of which often exceeds the original cost of the grain' (Jackson, 1810, p. 5).

The German-Austrian geologist Oskar Lenz (1884, p. 116) remarked that the Sebou 'would make an excellent waterway from the Atlantic coast to the vicinity of Fes' but the indolence of Moroccans prevents its exploitation. At the dawn of 20th century, the French traveler Jean Du Taillis (1905, p. 196) observed that the Sebou 'is a real obstacle to commercial transactions with Fez, until the day when it will become the most accessible way to reach the Cheriffien capital'. Du Taillis's vision of the Sebou never materialized as railroads became the surest way to access Fez from the coast, but the river's mouth was dredged soon after the establishment of the Protectorate and a new port—named after Lyautey—was established at Kenitra.

It seems reasonable to conclude that the absence of proper transport infrastructure in precolonial Morocco was more a consequence than a cause of the weakness of commercial activities in the countryside. Moreover, one could argue that the use of wheeled transport in precolonial Morocco would not have reduced transport costs significantly to spur a commercial expansion. The case of neighboring Spain in the 18th century reminds us that wheeled vehicles did not achieve a decisive advantage over pack animals until the advent of the industrial revolution and the development of a railway system (Ringrose, 1968). Medieval northern Europe presents a different case than that of Spain and other Mediterranean countries; the building of new roads and maintenance of existing Roman roads was above all a military necessity given the frequency and abundance of rainfall there. The revival of trade in the High Middle Ages would contribute to the further development and expansion of these roads and the growth of towns along them.

Price disparities of basic food necessities between cities and regions are another testimony to the scantiness of commercial activity and the absence of an integrated national market capable of creating the price signals necessary for alleviating the effects of droughts and crop failures. Stutfield who witnessed the Great Famine of

1878-1882 observed that 'often they are starving in one place while corn is selling cheap in another, but transport is so slow and expensive that one cannot help the other' (Stutfield, 1886, p. 199). Integrated national markets are important for the success of regional specialization in commercial agriculture which could benefit from the positive spillovers associated with the concentration of one form of agriculture; the plantation of sugar cane in the irrigated perimeters of the Haouz and Souss presents a convincing example to prove this point.

Sugar cane was introduced to Morocco around the 9th century and became an important crop in the Souss valley and in the Haouz plain near Marrakech. It led to the development of a sophisticated system of irrigation as well as a sugar refining industry that was monopolized by the Makhzen. By the 16th century, sugar became the most important export to Europe, and Sa'di sultans bartered it for luxury goods and the military equipment that was key to their success in unifying the country and liberating many of the Spanish and Portuguese strongholds on the Moroccan coast. But the success of the sugar cane industry was ephemeral as it relied almost solely on the export market (Berthier, 1966). With the development of the Triangular Trade in the 17th century, sugar from the New World poured into Europe and became a serious competitor to Moroccan sugar. Moreover, European colonial powers successfully protected sugar from their colonies by restricting imports from other nations. In the absence of an integrated domestic market capable of absorbing the supply of the sweet substance, the fate of the Moroccan sugar industry was doomed. By the late 17th century, sugar refineries in Souss and Haouz fell to disrepair and the plantation of sugar cane was abandoned in most places and replaced with subsistence crops.

d) Vulnerable rural peddlers

The scantiness of commercial activity in the countryside had never given the impetus for the emergence of a class of rural merchants capable of becoming agents of change in an archaic society. In medieval Europe, itinerant merchants were instrumental in the commercialization of the agrarian economy 'as they wound their way across the medieval countryside' (Heilbroner & Milberg, 2012, p. 33); no wonder they were called "pie-powders," from *pieds poudreux*, dusty feet in French. Moreover, the rise of the itinerant merchant contributed to the slow urbanization of medieval life and the creation of new towns, which further stimulated the commercialization of the agrarian economy and its monetization (Rosenberg & Birdzell, 1986, p. 77). Japan experienced a similar process starting in the 17th century thanks to the peace brought by the Tokugawa conquest. The uninterrupted peace coupled with an improvement in transportation stimulated trade so that 'the islands of commercial farming expanded, ran together, and began to fill in the surrounding sea of self-sufficient economy'

(Smith T. C., 1959, p. 67). Moreover, advances in agriculture not only led to capital accumulation but also contributed to the general development and integration of markets, which in turn affected the way in which peasants interacted with each other. The rapid urbanization Japan witnessed in the 17th century is a testimony of the improved commercialization of agricultural produce.

In precolonial Morocco, the little trade that took place in the countryside was undertaken by peasants themselves or petty itinerant peddlers (*rebbah*) who lacked any financial sophistication and their line of business was limited to the few necessities peasant households bought from the market such as spices, sewing notions, mirrors, and cotton fabric (M.S.M., 1915, vol. 1 p. 194). Moreover, the fact that a number of these petty peddlers were Jews¹⁷ made them vulnerable to Makhzen officials who occasionally seized their goods if suspected of speculation in food-stuff. Although it was customary for peasants to attend the nearby weekly market, they never made enough money out of them to envisage trade as a sole mean of earning a living. Moreover, one must be free to decide when and at what price to buy and sell in order to earn his living exclusively from trade; this was not always the case in precolonial Morocco given the restrictions inherent in any tribal society that promote communal interests over those of the individual.

The mediocrity of commercial exchange in the countryside and the lack of a rural merchant class explain the stagnation of commercial laws. Edmond Doutté (1905) rightly observed that in precolonial Morocco there was never a distinction between commercial law and general law (*droit commun*), so this later is applied to merchants without any regard to the interferences it may cause to their commerce. In medieval Europe, the *pie-powders* were instrumental in formalizing the institutions of commerce such as the *Lex Mercatoria* which would prove instrumental in the commercial expansion of Western Europe (Hawk, 2015, p. 204).

The merchant class was urban and made its fortune from the trans-Saharan trade, but this type of commerce was fundamentally different from that carried by the *pie powders* of medieval Europe. First, the trade was detached from the country's economic structures as it consisted of luxury items destined to urban centers and to re-exportation to Europe with little involvement by the rural population:

[...] a sizeable share of goods is imported then exported: the Moroccan economic space is simply crossed; it serves as a material and political support for the transfer of products kept intact without processing between different economic areas which have not yet established direct relations (Pascon, 1980).

Once direct relations were established in the aftermath of the French incursion into the Niger Bend from the coast of Senegal, the trans-Saharan caravan trade crumbled. Second, the trade was effectively monitored by the sultan as he controlled garrisons along caravan routes which enabled him to capture considerable sums, indirectly by means of taxation and directly through the profits generated by merchants under his protection. This prevented the emergence of an independent commercial bourgeoisie and produced instead a commercial aristocracy closely linked to the sultan (Lacoste, 1974). Daniel Schroeter argues that even after the growth of maritime trade with Europe in the mid-19th century, Moroccan merchants 'never became a clearly definable socio-economic group, nor constituted a cohesive class with any autonomous base of power' (Schroeter, 1988, p. 55). In his view, merchants were too dependent on the sultan for loans and monopolies, and subsequently on European capital and consular protection, to evolve into a bourgeois class that could assume any significant role in the social and political transformation of the country.

Confirming Karl Polanyi's analysis of pre-modern economies¹⁸, precolonial Morocco exhibited a combination of three modes of exchange. First, there was the pre-exchange householding form where family units produce food, garments, and tools for their own use and consumption. This was the dominant form of exchange in the rural areas whether in the plains or the mountainous regions, and the little exchange that occurred often took the form of reciprocity¹⁹ such as sharecropping and gift-giving as well as the bartering of goods according to predetermined exchange ratios. The local mystical saint played an important role in "supervising" this reciprocity as Paul Pascon (1980) remarked:

More prosaically, the saint plays a distribution function, and gradually ensures a food balance, reducing excessive effects of social inequalities, regional disparities and inter-annual fluctuations.

Finally, the trans-Saharan caravan commerce as well as maritime trade with Europe were forms of redistribution where the sultan extracted tribute, taxes, rent, fines, gifts, and confiscations to redistribute them to the different sectors of his Makhzen and to provide food relief in case of famines. A true market exchange where participants are disembedded from the rules of society was inexistent in precolonial Morocco even in the largest cities²⁰. After the European commercial penetration, only an embryo of a market economy would appear in the coastal towns such as Tangiers. But European interests during this period were too shy to result in a significant restructuring of the traditional economy as merchants remained rooted in their socio-cultural environment despite their commercial links with Europe.

e) Weak urbanization

Another consequence of falling population densities in the countryside is the decline of urban life. William Lemprière (1793, p. 711) remarked how 'towns are very few in proportion to the extent of country, and those are but thinly inhabited'. It is imperative to point out that the size of urban settlements in the pre-industrial age was constrained by the amount of surplus food produced by peasants and their willingness to trade part of that surplus for urban-made manufactured goods. Ester Boserup (1976) explained that in land-extensive, sparsely settled areas it is difficult to accumulate such food surpluses let alone trade them for urban manufactures²¹.

The agricultural prosperity of Morocco and the predominance of settled agriculture during the early Islamic period helped support unprecedented levels of urbanization. In the 13th century, Fez comprised over 200,000 people, which is substantial for a medieval city; Paris, Europe's largest city at the time, had a population of only 160,000 while Madrid had only 3,000 inhabitants²². With the Bubonic Plague in the 14th century, the population of Fez fell to around 100,000 and oscillated around that figure until the advent of the French Protectorate. The decline of Marrakech was more deplorable: the city boasted a population of 150,000 in the 12th century, but was severely depopulated in the aftermath of the Bubonic Plague. It witnessed a short-lived prosperity during the Sa'di reign, but the collapse of the dynasty in the 17th century hastened its depopulation so that by the 19th century less than 35 thousands dwelled in the city, and most of them lived in a state of misery (Buffa, 1810, p. 175). Asilah, once a thriving port town, was described by Michael Russell as having 'no trade, and appears entirely destitute of wealth and industry, affording shelter only to a few miserable inhabitants' (Russell, 1835, p. 262). Dar El-Beida or Anfa, today's Casablanca, retained throughout the precolonial period a rural character, 'huts and a very few houses are the only habitations [...] both of them to say the least are very sorry buildings' (Drummond-Hay, 1848, p. 55).

The role of towns and cities in economic growth, even in its pre-industrial form, cannot be overstated. They fulfill a logistical role for trade in addition to organizing the flow of information on which trade relies. Fernand Braudel eloquently likened their role to an electric transformer:

They increase tension, accelerate the rhythm of exchange and constantly recharge human life. They were born of the oldest and most revolutionary division of labour: between work in the fields on the one hand and the activities described as urban on the other (Braudel, 1981, p. 479).

This was true in Western Europe starting in the High Middle Ages when a growing urban population demanded more and more agricultural goods from the neighboring countryside. Peasant families mobilized their underutilized workforce—especially women and children—in agricultural production to sell in the market, gradually abandoning their domestic crafts. The earned monetary income was spent to purchase garments and other textiles produced by specialized urban craftsmen and thus more "attractive" and of better quality than those made at home. This virtuous cycle of urban-rural exchange came to halt abruptly in the mid-14th century as a result of the Bubonic Plague and the ensuing depopulation, but as European population recovered in the 16th century it spurred a new wave of urbanization that took an unprecedented scale in the Low Countries and England (Hays, 1998, p. 109).

In precolonial Morocco, the size and paucity of towns reveal their residual role as centers of trade for agricultural commodities as well as suppliers of industrial products to the adjacent countryside. Jean-Louis Miège remarked that :

The Moroccan city is not a spontaneous creation, the result of an economic and social evolution. It did not experience slow expansions. It is the deed of the prince, every dynasty founding its own capital. [...] Also the city is foreign and populated by foreigners [...]. Despite the importance of its crafts and commerce, the city was only a small thing in the middle of the rural mass. They [cities] formed a world apart (Miège, 1952, p. 90).

Marvin Mikesell (1958) explains that the rarity of towns in Morocco can be explained by the presence of the weekly *suq* which fulfilled many of the functions that were traditionally provided by towns. This was also true in Europe during the Middle Ages, but the subsequent demographic expansion caused many of these markets to grow into permanent towns or "bourgs". Rarely do we see in precolonial Morocco the commercial towns that derived their prosperity from servicing the surrounding countryside. In the accounts of European travelers, only a handful were mentioned and described as prosperous through their commerce with the hinterland. This was the case of Bezou and Demnat on the northern edge of mountains:

[...] placed at the entrance of the roads that lead to these mountains, they became the contact point necessary for the people of the plains and the mountain dwellers, the market where they exchange the products of their industries and of their different agricultures. Hence the importance of these cities which are above all centers of commerce. (Basset, 1917, p. 120)

It is no coincidence that these few prosperous towns were in areas where intensive farming was practiced and population densities were much more important than the rest of the country.

Starting in the 18th century, some coastal towns were granted trade monopolies by sultan Mohammed III. This was the case of Essaouira (Mogador) through which all maritime commerce of southern Morocco passed. Many merchants from Fez and Marrakech flocked to the city and established trading houses that specialized in the export of goods brought from Timbuktu as well as local products from the nearby High Atlas. They were extended loans from the sultan to conduct trade on his behalf; incentives were also given to foreign merchants in the form of lower duties (Schroeter, 1999, p. 81). Some towns in the interior such as Imintanout played the role of export entrepôt and grew parallel to Essaouira's trade (Berque, 1953). The decline of the trans-Saharan trade in the late 19th century dealt a blow to the city's prosperity as the center of maritime trade moved north to Casablanca where cereals and wool were becoming the country's main exports.

But these "centers of commerce" never developed into semi-independent entities that strive to expand the interests of their merchants²³ by creating a hospitable climate for commerce to flourish outside the arbitrary control of the sultan and his representatives. Instead, these merchants remained locked in a system of "administrated trade" that restricted their decisions and kept them indebted to the sultan. Moreover, cities in precolonial Morocco exclusively depended on the sultan and his army for their protection from neighboring tribes who occasionally threatened them and harassed caravans heading in or out of them (Ayache G., 1978). No wonder that throughout the history of Morocco townspeople were relatively docile vis-à-vis the sultan and seldom challenged his authority on economic motives.

One of the few urban rebellions took place in Fez in 1873 and was led by the tanners who demanded the abolition of market taxes (*maks*) as a condition to their allegiance to the newly enthroned sultan Hassan. The sultan yielded to their demands but soon reinstated the tax causing an insurrection that necessitated the intervention of the artillery. The rebellion was violently subdued and the tax maintained, reaffirming the subjection of the city's merchants and artisans to the sultan and his Makhzen (Sebti, 1991). In 1904, Marrakech witnessed a popular insurrection led by the guild of cobblers in response to the further debasement of the brass currency that served as a medium of exchange among the city's artisans; Paul Pascon (1977, p. 437) thought mistakenly that the revolt of cobblers was Morocco's 'first popular insurrection that is specifically urban'.

In medieval Europe, towns were born out of the resurgence of rural trade in the densely populated regions, such as Flanders and northern Italy, but they also stimulated trade as the demand they exercised on their surrounding countryside breathed life into agriculture and the process of exchange. They were the main agents in generating the capitalist spirit and the market institutions that became the characteristic form of post-medieval Europe. In addition to being centers of trade and crafts, medieval European towns became beacons of learning with schools, libraries, and universities that paved the way to the intellectual revival of the Renaissance and the gradual demise of superstition.

f) The stagnation of crafts

The decline of cities and the stagnation of their populations had also its effect on industrial development. Le Tourneau remarked that the number of crafts and the people each employed in the city of Fez hardly changed from the time of Leo Africanus to the eve of the French Protectorate:

Most guilds accounted for a constant number of enterprises: It is interesting to note that many of the figures provided by Leo Africanus in the early 16th century, about crafts in Fez, are almost exactly identical to those found in the French consular report of 1898 [...] astonishing fixity of crafts in Fez (Le Tourneau, 1949, p. 297).

Prosper Ricard (1924) estimated the number of occupations in Fez to be 126, but these include crafts as well as commercial occupations such as grocers and muleteers. The number of industrial occupations in a city is an indicator of the level of specialization. In Paris the number of guilds grew from 100 to 350 between the mid-13th and 14th century reflecting the demographic expansion of the Late Middle Ages (Rutenburg, 1988, p. 30), while London saw its crafts quadruple in number from 170 in 1300 to over 720 in the 1700s (Persson, 2010, p. 35). Adam Smith famously wrote that the level of specialization in a city is stimulated by the 'extent of its market', another word for aggregate demand. In other words, craftsmen cannot specialize in particular product lines, or particular stages of production, if they cannot sell a sufficient quantity of their output. It is the growth of the market that facilitates both the emergence of new production methods and the growth of craft industries that exploit these methods (Smith A. , 1776/2003, pp. 27-32).

In the case of precolonial Morocco, the stagnating population and the subsistence ethic of the rural masses limited the extent of specialization and prevented the development, amongst the artisan class, of an industrious mind that strives to improve existing production methods and when possible adopt new ones.

In a sense, Morocco's craftsmen were an urban reflection of its peasants: "satisficers" rather than "maximizers". As already noted in chapter 3, craft guilds (*hantta*) were established for every occupation to provide stability to their members and were suspicious of competitive behavior. Finally, craftsmen lived in the same precarious environment as the rural population and were subject to famines and epidemics that took a toll on their number and causing the loss of hard-to-replace skills²⁴.

The under-population of the countryside had not only stalled any industrious development in the urban centers; it never gave the impetus for the emergence of a rural craftsmanship tradition as was the case in medieval Europe and Tokugawa Japan where dense populations allowed the efficient exploitation of many technologies. In Europe, the process of technical innovation took place starting in the 9th century as a response to rising population densities in the Po Valley and the Low Countries so that by the 'long thirteenth century' novel agricultural tools such as the moldboard plow, the horse collar and the windmill had spread throughout northwestern Europe and were produced by increasingly specialized rural craftsmen (Thoen, 1997, p. 86). The rise of the rural craftsman in medieval Europe was the embryo for a much more elaborate rural cloth industry, which eventually curbed the grip of urban guilds over industry and unleashed the productive forces that made the prosperity of northwestern Europe (Pounds, 1994, p. 288). Franklin Mendels (1972) used the term "proto-industry" to describe this type of rural production, which he identified as the 'first stage of industrialization'. Japan had also witnessed a proto-industrial development that laid the seeds for successful industrialization in the late 19th century as it prepared the rural folks to the discipline and hierarchy of modern factories (Howell, 1992).

In precolonial Morocco, peasant families produced all their garments using "homegrown" wool; even the family's tent was made using goat and camel hair in a meticulous and arduous process that took many months and involved every member of the family. This form of production was referred to as '*artisanat domestique*' by Fernand Braudel who described it as 'resisting the market economy' (Braudel, 1977, p. 208). In the sparsely populated rural regions the evolution of these domestic crafts into profitable proto-industrial enterprises was operationally impossible. Only in the densely populated mountain valleys that anything resembling a market-oriented craft production could exist. This was the case of rug making in the Atlas, but these remained rudimentary family enterprises lacking the "extent of the market" that would have permitted an increased division of labor capable of spurring innovation. Bidé de Maureville, a French officer who spent years of captivity in Morocco in the 18th century, reported the following about its industry:

The industry of the Moors is limited to few things; throughout the empire, they only know how to make one kind of woolen cloth, which they call haik [...] except in Fez where [craftsmen] enjoy some kind of liberty, and still preserve some privileges; they manufacture small stuffs, belts, turbans, and cords made of silk, [...]; besides, they are bad entrepreneurs, bad carpenters, bad smiths, and, in a word, very bad artists in the few trades they have (de Maurville, 1775, p. 379).

The archaism of agricultural tools in precolonial Morocco is evidence of technological stagnation in the countryside. As already noted, farming instruments were made by peasants themselves and had not changed since biblical times. The low population densities and the extensive agriculture they engendered never acted as a force to improve these rudimentary tools or to adopt new ones capable of exploiting more strenuous soils on a regular basis. In medieval Europe, the adoption of the moldboard plow capable of turning the soil would prove momentous as it enabled northern European peasants to expand farming into heavier and more strenuous soils (Andersen et al., 2016). Although European farming instruments were introduced in the mid-19th century by the future sultan Mohammed IV, but their use remained quasi-restricted to Makhzen exploitations (Pascon, 1977, p. 397).

Milling technology is another striking example of technical mediocrity in the Moroccan countryside as human and animal powered mills were the standard grinding instruments for grains and olives. One could reasonably argue that precolonial peasants and artisans never constrained to improve or expand on existing watermill technology, or harness the more abundant wind energy, especially in the coastal regions. Although Fez and Tetuan were renowned for their watermills which were powered by an extensive system of underground canals, their mechanism remained archaic and had not changed since medieval times²⁵. Cities without a permanent river or canal with sufficient water flow had to rely on animal-powered mills which are costly to maintain.

Watermills were a ubiquitous feature of European landscape starting in the Late Middle Ages and they expanded both in number and function as their energy was applied not only to grinding grains but also to extracting oils, forging iron, sawing wood, making paper, and fulling wool. A number of watermills subsisted to the industrial age despite competition from steam-mills. As early as the 12th century, Europeans learned to harness wind where hydraulic power was not available; windmills were used to pump water from swamps in the Low Countries to expand agricultural land as existing farmland became insufficient to support the growing population, both rural and urban (Issawi, 1991). In the 17th century, Zaandam became

the first industrial town in history thanks to its wind-powered sawmills that supplied a flourishing Dutch shipbuilding industry. Although windmills were unknown in pre-Meiji Japan, watermill-technology was highly developed and powered a number of industries other than milling grains (Hashimoto, 2009, p. 107).

g) Preponderance of common property

The weakness of individual property and the prevalence of collective ownership can also be blamed, at least partly, on low population densities and the extensive system of agriculture they engender. Boserup explained that ‘a sustained and rapid increase of population must end by creating the need for land improvements as a precondition for the transition to systems of shorter periods of fallow or no fallow at all’ (Boserup, 1965, p. 91). In other words, individual properties are consolidated only when the cultivation cycle is shorter, and the quality of each single piece of land begins to matter.

In Europe, the gradual enclosure of common fields was a direct consequence of the demographic revival of the late 15th century. The enclosure process was accentuated in England by an expansion of sheep farms to meet the growing European demand for wool, ‘so that much of England was enclosed before the 1840s’ (Grigg, 1980, p. 176). In comparison, land in the under-populated Atlantic Plains was overwhelmingly communal and enclosures were restricted to few pockets where intensive agriculture was practiced such as the Doukkala and ‘Abda; William Lemprière observed the stark difference in land tenure between the English and Moroccan countryside in the late 18th century:

The variety which distinguishes the more improved countries of Europe, and particularly England, probably arises as much from the land being distributed into enclosures, as from local situation. This advantage the Empire of Morocco does not enjoy; since, excepting in the immediate vicinity of towns, no divisions of land are to be observed; the Arabs indiscriminately choosing pieces of ground, without fences, for the purposes of agriculture, which, as I before noticed, they change as occasion requires (Lemprière, 1793, p. 83).

In the regions where the agro-pastoral mode of exploitation was dominant as in the Zemmour tribe, peasant communities had to always devote a sizeable share of their land to grazing and distribute the rest to the head of every household for farming in proportion to the number of draft animals each possesses. As already noted in chapter 3, the standard unit of farmland was the *zouja*, the area a yoke of two animals can plow. To maintain soil fertility at no labor cost, peasant communities had

to rotate farming and allow for a fallow period, so land was continually redistributed amongst individual peasants for the purpose of farming (Lesne, 1959, p. 45). In such a system of land exploitation, individual property is impossible to emerge and communal forms of land ownership become entrenched in tribal practices to the point where attempts to individualize land ownership are vehemently resisted.

It is estimated that at the dawn of the Protectorate, no more than one fifth of arable land was under individual property (*melk*) while 70 percent were held collectively (Bouderbala, 1996). In his description of the Chaouia in 1900, Frédéric Weisgerber observed that 'private properties were quite sparse and formed only islands in the vastness of collective lands'. He explained that the rare individual landowners were 'the chorfa, marabout, Makhzen officials and other individuals who have rendered services to the sultan' (Weisgerber, 1935, p. 7). On the other hand, in the densely populated parts of Doukkala and Abda land was enclosed and peasants were free to exploit it and divide it as they pleased. Goulven (1920) reported in the early years of the French Protectorate that individual property in Doukkala is very developed and land is highly fragmented, which reflects how the Doukkali peasant 'is strongly attached to the land that sustains him'. Robert Montagne (1930, p. 248) observed in the Souss plain that there are no collective lands in the areas where sedentary agriculture is practiced and that property and production are organized at the family level; he made a similar observation in the High Atlas:

Property is strictly individual. Each household possesses on average fifteen small terraces, on which irrigated crops are grown. [...] everyone is attached at keeping intact the small domain of terraces and fruit trees that belong to him (Montagne, 1927).

It is important to point out that individually held properties were not shielded from confiscation from the Makhzen, so there is a difference between the concept of individual property and that of its sanctity from confiscation. Paul Pascon explained how individual property in the Haouz of Marrakesh was constantly confiscated by powerful warlords during the state of insecurity the region witnessed in the end of the 19th century (Pascon, 1977, p. 449).

Communal ownership of agricultural land is a serious obstacle to agrarian change as it entails risk that only few individuals would dare take. But when decisions are made by rural communities that engage in subsistence farming, the risk-averse would always outnumber the risk-prone. In her study of European agrarian history, Rosemary L. Hopcroft found 'that, in general, agrarian change was least likely in regions of communal agriculture and most likely in regions of less-communal agriculture' (Hopcroft, 1999, p. 230). This was especially true in Morocco after the

European commercial penetration; the prevalence of collective ownership in the vicinity of port towns would prove an obstacle to its efficient exploitation by the tribal community. Only powerful Makhzen officials were able to take advantage of this opportunity by expanding their landholdings at the expense of collective land and entering into agricultural ventures with Europeans.

4. Why has population stagnated?

The demographic inferiority of precolonial Morocco can be attributed to two main factors: the natural calamities whose recurrence intensified starting in the 14th century as well as the predatory nature of the Makhzen which deprived the rural populace from a substantial part of its agricultural produce and often killed or displaced those who resisted. Both of these factors destabilized many parts of the country and created a state of anarchy that compounded their negative effects on population, both rural and urban. Bernard Rosenberger (1984) rightly remarked that '*la géographie de la violence est largement celle de la faim*'.

As already noted, Morocco witnessed episodes of famines combined with ravaging epidemics that took a toll on population both urban and rural. The sequence of events is difficult to construct from the historical records. Studies on the demographics of pre-industrial Europe suggest that epidemics were a much more potent killer than famines, but it is highly unlikely that this was the case in precolonial North Africa. Death by starvation was repeatedly mentioned in historical sources, both Moroccan and European, and affected peasants and townsmen alike.

Drought is a common feature of the Mediterranean climate, and its incidence is more pronounced toward the south where rainfall is low to begin with. These droughts brought shortages, but peasants were often prepared to offset them with their stored reserves, especially if the drought is short-lived. Prolonged droughts however had disastrous and lasting consequences. Once the grain silos were emptied, peasants were reduced to eating substitute food with low nutritive value such as *yerni*, the root of a wild plant. Moreover, livestock which represents the peasants' main savings and the source of leather and wool for urban crafts was the first to be forfeited. Finally, the scarcity of seeds coupled with a substantial reduction in draft animals put a severe constraint on future harvests. Accounts of European travelers to are filled with vivid depictions of starved peasant communities. Lemprière witnessed the ravages of the 1780 famine and wrote:

This calamity was increased to such a degree [...] that several unfortunate persons actually died in the streets for want of food; many were driven to the necessity of digging in the earth for roots to

supply the urgent calls of nature, while others were happy to find some undigested corn in the dung of animals, which they most eagerly devoured (Lemprière, 1793, p. 102).

Yet starvation was not the only consequence of drought-induced shortages. Malnutrition increased the incidence of infectious diseases such as cholera, plague, and typhus, which exacerbated the loss of human life. In a letter to his wife, John Drummond-Hay wrote that he 'asked the sultan to lend seeds gratis to the poorer farmers' and warned that 'if something is not done we shall have fever and famine again this year [...] I fear the winter, and poor folk flocking to the town, will bring typhus' (Drummond-Hay, 1896, p. 164). Moreover, the effect of infectious diseases transcended their direct victims since they limited the movement of people and merchandise, further aggravating shortages and reinforcing the vicious cycle of famines and epidemics.

The severity of famines and epidemics in Morocco goes back far before the precolonial period. Leo Africanus wrote in the 16th century that 'in Barbary the plague is rife every tenth, fifteenth, or twentieth year, whereby great numbers of people are consumed' (Africanus, 1526/2010, vol. 1 p. 181). In Moroccan sources, the word plague is referred to by the Arabic term *ta'oun* or *waba?*, a general term meaning deadly epidemics, which could be plague, typhus or cholera. Among the countless outbreaks reported in Moroccan as well as European sources, the following are some of the most devastating occurrences as detailed in the seminal work of Bernard Rosenberger and Hamid Triki (1973-1974) as well as al-Bazzaz (1992).

The first documented outbreak of plague in the 15th century occurred in 1413-1414 but very little is known about its geographical extent and severity; some argue that it facilitated the surprise capture of Ceuta by the Portuguese in 1415 (Benhima, 2010). In 1441-1442 a severe epidemic hit the country and lasted 18 months causing considerable losses in human life, estimated at 400 to 500 people per day in Fez alone. Other outbreaks followed in 1468-9 and 1493, which coincided with the first waves of Andalusian refugees escaping the Spanish Inquisition: many of them perished as a consequence.

The 16th century was also marked by successive periods of famine and epidemics, 11 in total, with far reaching demographic, political, economic consequences. The century began with a few and sporadic cases of plague in Fez in 1509 and in the Souss in 1512. A severe drought is recorded on the Atlantic coast, including Azzemour and Safi in 1517, and Agadir in 1518. These were followed in 1521-2 by a terrible famine, coupled with a general plague, described in Portuguese

sources. Some claim that the loss of life reached 70 percent of the population. Sedentary life declined to the point that some cities in the Atlantic Plains were depopulated before being abandoned by their inhabitants. The famine was so severe and prolonged that many of the inhabitants of the coastal plains sold themselves as slaves to the Portuguese and Spanish in the towns they held along the Moroccan coast (Bouchareb, 1996). Other outbreaks of plague recurred particularly those of 1557-58 and 1596-1608 when the people of Taroudant fled their town toward the mountains and the death toll in Marrakech reached up to 2,000 per day. Sultan Ahmed al-Mansour succumbed to the plague in 1602 and the country plunged in a war of succession between his sons.

The severity of sixteenth-century demographic crises led to an important socio-political development in Morocco: the emergence of all types of mysticism and the founding of Sufi brotherhoods (*zawiya*) as spiritual and economic bulwarks against the sufferance of peasants and townsmen from such calamities. The *zawiya Dila'iyya* for example was founded in 1566 in the Middle Atlas as a Sufi refuge and quickly attracted adherents from across the country; by the 17th century the political clout of the *zawiya* grew and its leader took advantage of the vacuum left by the demise of the Sa'di dynasty to unite northern Morocco for a brief period.

The 17th century can be considered as worse than the previous two since it witnessed a total of 27 episodes of famines and plagues in addition to the ruthless rule of the megalomaniac sultan Ismail (1672-1727). The most serious of these episodes occurred in 1661-1663 and affected all parts of the country. Chroniclers described apocalyptic scenes of poor wretches forced to eat carrion, dead bodies and some resorted to cannibalism. Fez lost a total of 12,000 of its inhabitant while many fled the city to the point where whole neighborhoods were deserted. In the countryside, many tribes turned to looting to survive; the vicinity of Fez was especially affected by looters coming from as far as the pre-Saharan Tafilelt valley.

The 18th century was astonishingly devastating from a demographic perspective. The first major drought occurred from 1721 until 1724. According to al-Du'ayf, the price of wheat reached 12 *mithqals* per *wasq* (130 kg) in the month of *sha'ban* of the year 1133 (May 1721) and this lasted for 4 years after which its price returned to only one *mithqal* per *wasq* (al-Du'ayf, 1818/1986, p. 97). Other famines hit the country in 1737-1738 and 1742, but the greatest of all occurred between 1776 and 1782. The chronicler al-Nassiri reported that people 'ate dead animals, swine, and [dead] humans and many starved to death' (al-Nassiri, 1894/2010, vol. 3 p. 173). Louis de Chenier vividly described people's suffering during this prolonged calamity:

In this time of extreme wretchedness the poor felt all the horrors of famine. They were seen wandering over the country to devour roots [...]. Vast numbers perished of indigestible food and want. I have beheld country people in the roads, and in the streets, who had died of hunger, and who were thrown across asses to be taken and buried. Fathers sold their children. The husband, with the consent of his wife, would take her into another province, there to bestow her in marriage as if she were his sister, and afterward come and reclaim her, when his wants were no longer so great. I have seen women and children run after camels, and rake in dung to seek for some indigested grain of barley, which, if they found, they devoured with avidity (Chenier, 1788, p. 335).

The earthquakes of 1755, known as the Lisbon earthquake, and its subsequent tsunami was also devastating especially on the northern Atlantic Coast. The chronicler al-Qadiri reported that scores of people drowned in the vicinity of Salé as the ocean swept over the land; few days later, another earthquake destroyed Meknes and killed 10,000 people (al-Qadiri, 1772/1986, vol. 4 p. 113).

The century would end with a disastrous plague that spread from the east and ravaged urban dwellers and the rural folks alike. According to Renaud (1921) the 1799 epidemic '*dépeupla au point de bouleverser profondément les conditions sociales et économiques du pays*'. An English traveler reported death tolls superior to 50 percent and wrote that 'mortality was so great that the living having no time to bury the dead, the bodies were deposited or thrown altogether into large holes, which, when nearly full were covered over with earth' (Jackson, 1810, p. 174).

Droughts were not the only cause of shortages; locust invasions were as detrimental to food security as an exceptionally dry year. Swamp of locust could destroy thousands of hectares of farmland and leave the population in desolation. In some instances, preemptive measures aimed at destroying the insect's eggs before they hatched were successful in curbing their numbers and the damages they inflict. In other cases however, even the deployment of soldiers and the forced mobilization of the population by the Makhzen to destroy eggs went in vain. Luckily, locusts are comestible insects and are highly nutritive especially in protein so Moroccans learnt how not to disdain eating them²⁶.

The discussion on droughts, locust invasions and epidemics brings an important question: Why were not these catastrophes as disastrous in antiquity and the early Islamic period as they were in later centuries? One possible answer is that climate

conditions changed in the Late Middle Ages causing a reduction in average rainfall and an intensification of droughts²⁷. In Europe and starting in the 10th century, a warming of temperatures referred to as the Medieval Warming Period is credited for an agricultural and demographic expansion, especially in the Low Countries. This warming of temperatures had inevitably affected North Africa, as confirmed by the few studies on the issue, and carried serious consequences in its arid and fragile environment. Most probably, it led to a decline of sedentary agriculture and a movement of populations away from the arid regions towards the more humid areas in the north, thus increasing competition for land and leading to tribal strife. The Tunisian historian Mohammed Talbi advanced the hypothesis that the Hilalian exodus was not the exclusive cause of economic decline in the Maghreb:

Without falling into a catastrophic conception of history, we can say that the Hilalians had brought the crushing blow to an economy that was already ill (Talbi, 1982).

According to Talbi, the region experienced starting in the 11th century a warming of climate accompanied by a decline in rainfall and an intensification of droughts, which had made the Maghreb 'a zone with weak demographic pressure' (Talbi, 1977). Based on documents available to him, Talbi notes that the 11th century began with a famine and plague that reached an unprecedented scale; then there were a succession of calamities with few years separating them²⁸. This trend continued into the following century to culminate in the Bubonic Plague, the effects of which were more severe than in Europe; Talbi advances the number of 50 percent in mortality due to the contagious disease. The frequency of epidemics and subsistence crisis would not falter in subsequent centuries and their toll would keep population in check so that demographic gains achieved in years of abundance and peace were swiftly reversed.

Whether the Hilalian invasion or a climate warming is to blame for the degradation of settled life in the Atlantic Plains is beyond the scope of this thesis. But one thing is evident in the history of Morocco: starting in the 15th century the country became increasingly vulnerable to political unrest and incapable of defending its territorial integrity against Portuguese and Spanish invaders who occupied most of the Atlantic coast. This political and military decadence reveals an economic decline that resulted from recurring demographic crises and the subsequent regression of settled agriculture.

Faced with such natural calamities, the Makhzen had little to do to assist the rural folks especially those in remote areas, which consequently reinforced tribal bonds at the detriment of an organized central authority. This would further aggravate, as we shall see, Morocco's prospects for modernization in the precolonial

period. Imports of grains helped relieve port cities and their neighboring countryside, but the lack of proper transport kept the interior in isolation and abandoned to its fate. Such a precarious environment never created the trust in the market that subsistence agriculturalists require to engage in commercial farming, further entrenching the subsistence mode of production.

In addition to the natural element, the human factor played a direct role in Morocco's demographic inferiority and the under-exploitation of its agricultural resources. As previously mentioned, the precolonial tax system was arbitrary and peasants bore the heaviest burden. Due to their accessibility, the Atlantic Plains formed the bulk of the land controlled by the Makhzen, and consequently contributed the most to the treasury. The Makhzen's "fiscal policy" was to reap as much surplus produced by peasants above their subsistence needs. This reflects the mistrust and suspiciousness held by the sultan towards his subjects. In a private conversation narrated by John Drummond-Hay, the sultan remarked that:

[...] his subjects were an ignorant and lawless people, quite unfit to be governed in the lenient manner [...]; that unless they were treated with the greatest severity and were not allowed to enrich themselves, they would show a more rebellious spirit than they do even at the present time (Drummond-Hay, 1896, p. 279).

Reiterating the sultan's logic, the minister Feddoul Gharnit famously declared 'pluck the tax-payer as one would a chicken, [for] if he becomes wealthy he revolts' (Michaux-Bellaire, 1907). Such a policy is understandable given the tribal context of Moroccan rural society and its tendency toward conflict. Jean-François Durand remarked that 'the art of governing in feudal Morocco, cannot be but conservative since it must manage multiple powers that could quickly fall into dissidence' (Durand, 2002, p. 22).

The 'ulama whose part of their religious obligation is to speak for the oppressed and provide the sultan with righteous advice on how to be just toward his subject were accomplice in the over-taxation of the peasantry and its destitution. They unquestionably provided Moroccan sultans with the religious license to increase rural taxes and sanctioned those who refused to pay them (Rassam & Miller, 1983). On the other hand, most 'ulama frowned upon market taxes (*maks*) whose burden of which often falls on the urban populace.

Ernest Gellner (1969) provides an interesting sketch of four centuries of Moroccan history based on the fiscal relationship between peasants and the Makhzen. He explained that Morocco's rural population belonged to either one of three

categories: an 'inner circle' of tribes that extracted, in the name of the sultan, taxes from the 'middle circle' of tribes but faced constant resistance from an 'outer circle' of tribes. Moroccan history can thus be summarized as the struggle of successive dynasties to maintain their power through the recruitment of "inner circle" tribes to prevent "middle circle" tribes from falling to the "outer circle".

Peasants received little in exchange for what they paid as most fiscal proceeds were squandered to maintain the sultan's palaces, his substantial household, and the Makhzen's apparatus. Driss Ben Ali argued that the Makhzen fulfilled no economic role that could have made it indispensable for the peasants; it was a mere parasite that lived off its host to 'assure the conditions of its own reproduction' (Ben Ali, 1983, p. 188). This explains why taxes in precolonial Morocco were often resisted especially at times of scarcity. But the sultan's policy was intolerant to such forms of disobedience; he sent punitive campaigns that moved through the countryside as locusts destroying what cannot be looted. These *harkas* as they were called caused much bloodshed and destruction. Visiting Morocco in 1905, Abel Brives observed:

The land is deserted and all douars are empty. Those who could not flee in time were completely destroyed by the qaid. Grains, cattle, chickens, everything was taken. We meet a few families that move away sadly. On a donkey, they accumulated objects that have been saved and the man actively pushes the little beast before him, while in single file are women and children. Farther back, an old man walks with difficulty; he leaves with regrets the land where he has always lived. It is sad, but this view is common in Morocco and the heart hardens to travel in this country both rich and miserable (Brives, 1909, p. 348).

On the other hand, regions that escaped the rule of the Makhzen enjoyed a relative prosperity especially if they fell under the protection of a powerful *zawiya*. Hugh Stutfield observed that the condition of the independent Berber tribes of the Atlas 'is a far more enviable one than that of their brethren who have to bow beneath the grinding yoke of Moorish tyranny' although 'they have not the same opportunities for acquiring wealth' (Stutfield, 1886, p. 262).

The lack of a transparent system of taxation had more detrimental consequences than the mere extortions committed by Makhzen officials. The fear of confiscation kept peasants from fully utilizing their land, let alone improving it:

Agriculture is destroyed. The farmers and peasantry only grow sufficient grain for their own requirements, and rich lands are allowed to lie fallow because the farmers know the crops would be

plundered by the Bashas and Sheikhs. Thus it happens also with the cattle and horses; breeding is checked, since the man who may become rich through his industry is treated as a criminal and all his possessions are taken from him. As in the fable, the goose is killed to get the golden eggs (Drummond-Hay, 1896, p. 278).

Budgett Meakin wrote about a peasant named Hamed Zirari whose story clearly elucidates the consequences of predatory taxation on agriculture:

I am Hamed Zirári. I was rich once, and powerful in my tribe, but now I have only this sheep and two goats. I and my wife live alone with our children in a nuállah (hut), but after all we are happier now when they leave us alone, than when we were rich. I have plenty of land left, it is true, but we dare not for our lives cultivate more than a small patch around our nuállah, lest we should be pounced upon again (Meakin, 1906, p. 243).

There were regions that, although administered by the Makhzen, escaped the general rule of over-taxation and extortions. As already mentioned there was the case of Doukkala which was fortunate to be administered efficiently and taxed moderately:

Under the domination of the [Alawi] Sultans who subsequently governed Morocco, Doukkala knew an era of prosperity thanks to an energetic administration which remained solid until the end of [Sultan] Moulay Hassan's reign (Jeannin, 1915, p. 9).

This surely had contributed to its prosperity and the entrenchment of settled life amongst its population. In addition to growing cereals, Doukkali peasants grew orchards of figs and grapevines, both of which require constant care that could only be provided by a fully settled population. They also built cisterns to collect rainwater and store it in case of future droughts (Goulven, 1920). However, with the death of sultan Hassan and the ensuing power struggle between his sons Abdelaziz and Abdelhafid, the tax burden became unbearable and the Doukkala peasants rebelled against their tax collectors (Jeannin, 1915).

Chapter 7: The Institutional Factor

This country is in such a rotten state that though the Sultan be a clever and good man, anxious for reform, he has not the courage nor the men about him to carry it into execution

John Drummond-Hay (1896, p. 232)

From their strong family attachments indeed, as well as from their inveterate prejudices in favour of ancient customs, these tribes of Arabs appear to be at a vast distance from a slate of civilization

William Lemprière (1793, p. 36)

As explained in the theoretical review, the development from a traditional, mainly subsistence-based economy to a modern, exchange-based economy implies changes that go far beyond the improvement of production tools and methods. These must be accompanied by a radical change in the institutions that guide economic interaction between individuals and communities. Much has been written on Islamic commercial institutions and how they stalled the economic prospects of the Middle East and North Africa. In the Long Divergence, Timur Kuran (2011) presents the case that the Islamic system of inheritance and the absence of corporations were to blame for the economic stagnation of Muslim society and its failure to keep up with an increasingly prosperous and militarily advanced West. I do not want this section to be a repetition of what has already been written on the role of Islamic institutions in Morocco's centuries-long economic sclerosis. As I hope the previous section has clearly elucidated, precolonial Morocco was an under-populated country with a precarious environment which made it incapable of modernizing on its own. In other words, even if Morocco had the right set of economic institutions prior to the European commercial penetration in the mid-19th century this would not have changed much to the economic conditions of the majority of its population. Thus, the question I am trying to answer in this section is: what are the institutional obstacles that prevented Morocco from taking advantage of the increasing economic interaction with Europe to modernize its economic structures?

To best answer this question we should turn our attention to the story of Japanese modernization in the aftermath of the restoration of commercial relations with the West in the mid-19th century. Understanding the Japanese success story provides the key to understanding why other attempts to modernize failed.

When the American fleet led by Commodore Matthew Perry arrived in Edo bay in 1853, no one suspected that it will launch one of the fastest and most successful processes of economic modernization. Once a commercial treaty with the United States was signed in 1858, Japan took advantage of Western superior technology and applied it to its key economic sectors, most importantly agriculture. Japanese agriculture was the engine that would provide momentum to Japanese manufacturing and ultimately to a powerful military. But how did Japanese agriculture quickly absorb Western technology and methods to finance the modernization of the rest of the economy?

The answer to this question lies in the reforms instituted by Emperor Meiji (1867-1912) to break the rigid feudal system that had been in place since the early 17th century and subjugated the peasantry to the *daimyo*, the samurai feudal lords¹. Although these reforms were resisted in the first decade after their implementation, they succeeded in breaking the feudal system and gave peasants, artisans and merchants incentives to adopt better methods and expand their production thereby allowing the central government, through a land tax, to capture a larger share of the agricultural surplus which was previously squandered in unproductive outlays by the Tokugawa Shogunate and the *daimyo*. Tax revenues were used to finance industrial and infrastructure projects, and equipping the military.

But these reforms were only possible because of two fundamental features of Japanese society. First, the Japanese elite class was conscious that the only way to remain independent in the face of Western imperialism is to modernize and reduce Japan's technological lag. It attested that the Japanese people might be superior in spiritual and cultural matters, but the key to advance in industry and armaments lay in Western technology. Their motto became *fukoku kyohei*: enrich the country, strengthen the army. Second, Japanese peasantry which formed 80 percent of the population had endured centuries of servitude by the *daimyo* that rendered it docile and compliant to a central authority. Unfortunately for precolonial Morocco, neither of these two preconditions was available. Instead, the country was shackled by two archaic institutions: the 'ulama and the tribe.

1. The 'ulama

The Moroccan elite class, if the term can be applicable, was dominated by the religious establishment called the 'ulama (pl. of 'alim), from whom the sultan drew his legitimacy and who filled most of his bureaucracy during the precolonial period². El Mansour (1992) notes that through the history of Islam, the association of the religious establishment and political power 'offered much more stability and cohesion to Islamic society than it engendered discord and antagonism'. Fez accounted for most of the country's 'ulama³ but only a small circle enjoyed access to the political affairs of the country. The sultan referred to them to formulate an opinion (*nasiha*) on an important issue in the light of their understanding and interpretation of the holy texts. In rare cases, the 'ulama would challenge the reigning sultan and replace him with a more qualified relative. The first French Resident General in Morocco, Hubert Lyautey wrote that the 'ulama represented the highest of Fez's aristocracy 'without whom nothing effective can be done here' (Hoisington, 1995, p. 43). Yet the 'ulama never formed a coherent group possessing a permanent and institutionalized organization as was the case for the Catholic Church in France, Spain and Latin America. This is due to the non-clerical character of Sunni Islam and also the constant supervision by the sultan, being the *amir al-muminin* (Commander of the Faithful), of religious affairs and his ability to support the candidacy of a particular 'alim to key positions such as the supreme judge (*qadi al-jama'a*). Despite lacking real power, the 'ulama had the ability to shape the ideology and behavior of the general populace through closely controlled preaching and conservative education as promulgated through educational establishments such as al-Qarawiyyin in Fez. Thus, Moroccan sultans clearly understood that controversial political decisions had to be backed by the 'ulama to add to their legitimacy and reduce the risk of contestation. This would represent a major obstacle to the modernization of Morocco in the 19th century.

The 'ulama's chief aim was to maintain the Islamic identity of Morocco and thought that the only way to achieve this objective is by limiting any contact with Europeans and by refraining from adopting their values, laws and institutions. No matter how eager the sultan was to modernize Morocco, he understood that the 'ulama would stand as an obstacle to his endeavors. The British ambassador John Drummond-Hay reported how he approached sultan Mohammed IV concerning the state of his government and 'urging upon his Majesty the necessity of sweeping changes in the judicial, financial, and administrative system of the country'. But the sultan replied that:

We and thou understand very well that all you suggest is very excellent, and might be most beneficial in developing the resources of our dominions; but the eminent men (Ulama &c) do not desire that we should introduce the innovations of Europe into this land, nor conform ourselves with Christian usages. We made certain promises on our accession to the throne, and unless my councilors alter their views, we cannot, without endangering our position (Drummond-Hay, 1896, p. 288).

Far from providing practical solutions to the country's ills and identifying their true causes, the 'ulama externalized the problems and ascribed them to European interventions in Moroccan affairs especially the practice of consular protection.

Such an attitude reflects the reactionary nature of religious establishments throughout the Islamic World. This suspiciousness towards the "Christian" West has been ingrained in the Moroccan elite since the time of the Reconquista in the Iberian Peninsula when the Moorish population was forced to convert to Christianity or leave. Other episodes of confrontation between Morocco and "Christian" Europe unfolded in the centuries after the fall of Granada in 1492, which strengthened this suspiciousness and turned it into fear, especially toward the Spanish and French whose imperialist plans had become obvious after the conquest of Algeria in 1830, the battles of Isly in 1844 and Tetuan in 1860. According to James Richardson:

The Sultan of Morocco surveys from a distance the events of Europe, and endeavours to arrest their effect on his frontier. The residence of the foreign consuls was first at Rabat, then at Tangier. The object has constantly been to keep the consuls, as far as possible, from his capital and the transactions of his interior, in order that they may not see the continual revolts of his tribes, and so discover the weakness and disunion of the empire (Richardson, 1860, vol. 1 p. 62).

The Grand Vizier who held the most powerful position in the realm, after the sultan, shared the same fears and suspiciousness of Europeans and strived hard to maintain the system. According to Stutfield, the foreign ambassadors may extract from the sultan 'vague undertaking to reforms', but 'as soon as they are gone he is tackled by his Vizir, who causes him to repent of his rash promises, and things remain as they were'; he further described the Grand Vizier Mukhtar al-Jam'i as:

[...] animated by an abiding hatred of Christians and foreigners, he is the chief obstacle to all internal reform, which his instinct tells him would weaken his position, and deprive him of many of the dubious means by which he makes a good livelihood (Stutfield, 1886, p. 260).

The same resistance to reforms was expressed by his successor Feddoul Gharnit. In a letter to the British ambassador, he wrote:

[...] but this country should not be measured with other countries when it comes to reforms, both internal and external [...] for this country is still lagging in urbanization while those countries are highly urbanized. Whoever is consulted amongst the knowledgeable men of this country about the suggested reform points out that there is no good in it for this country. They insist on their opinion and back it with clear and unquestionable evidence (Gharnit, 1886).

It is a surprise to the economic historian that during the whole of the 19th century, not a single mile of railroad tracks had been laid in Morocco. Many British companies made offers to link Tangiers and Fez as well as Essaouira and Marrakech, but the sultan and his advisors saw railroads as a threat that would facilitate any eventual European military incursion to the interior of the country⁴. It was probably through the same logic that sultan Hassan refused to establish navigation services on the Sebou river, which passes near Fez (Abitbol, 2009, p. 365).

Another technological innovation that was resisted by the sultan is the telegraph. Despite the urging of European ambassadors to lay down lines from Gibraltar to Tangiers and then to Fez, the sultan insisted on limiting the telegraph to Tangiers and providing as an explanation his fear that the tribes may cut the wires, which may entail the payment of reparations on the part of the Makhzen. Khalid Ben-Srhir argues that the sultan feared the telegraph for commercial reasons. In the sultan's logic, the availability of information about prices would empower European merchants against his protected merchants and would threaten the profits he derived from maritime trade (Ben-Srhir, 2005, p. 220). The Moroccan chronicler al-Nassiri, who was also an advisor to sultan Hassan, expressed his suspiciousness of the telegraph as well as the railroad as tools of European colonialism:

[...] many ambassadors came to visit the sultan such as the French, Spanish and Portuguese ambassadors as well as others. The French spoke of the train and telegraph and spreading them in Morocco as it is the case in the rest of the world, and he claimed that there is great benefit in them for both Muslims and Christians, when in fact it is a source of great harm. Now that the Christians have brought mangle to the rest of the world, they want to bring mangle also to this blessed land which God has purified from their uncleanness. We pray God to expose their plot, and protect the Muslims from their evil (al-Nassiri, 1894/2010, vol. 3 p.392).

Such expressions of suspiciousness were not exclusively made by people like al-Nassiri who had never traveled to Europe. Learned Moroccans who visited France or Britain in the 19th century and witnessed their material progress wrote about their contempt of Western values in spite of expressing their amazement at the technological advancement and method of government in these countries. The aforementioned as-Saffar who was part of the diplomatic mission to France in 1846 was impressed by French government, their industry, the intensity of their agriculture and their transport infrastructure, yet had to express remorse for the simple fact of visiting an infidel country:

May God forgive me for what my hands committed, for the repulsive abominations my eyes witnessed, for the detestable blasphemies and confused mutterings of the misguided which my ears heard (as-Saffar, 1846/1992, p. 221).

Such statements reflect the opinion of the 'ulama concerning commerce with the "Christian" nations. They vehemently opposed it and some 'ulama went as far as calling the travel of Moroccan merchants to Europe as a form of treason (Cigar, 1981).

When trying to reconcile Europe's technological and military progress with the Muslim perception that Christianity is a "distorted" religion⁵, some Moroccan travelers minimized the significance of this progress and saw technological advancement as inferior to the knowledge Muslims held about the divine; they reinforced their argument by quoting from the Quran:

[...] they know perfectly well what is apparent in earthly life, but about the hereafter they are completely ignorant.

Tahar al-Fassi, a Makhzen official and learned man who travelled to London in 1860 claimed that the steam engine was the product of the 'mind of darkness' which helped the British 'comprehend these matters of darkness and further thrust them in their disbelief' (al-Fassi, 1860/1967, p. 28). More importantly, Moroccan travelers failed to understand that European technological achievements were the result of scientific inquiry and curiosity about the natural world, not of divine guidance. After visiting Paris in 1860, Idriss al-'Amrawi wrote extensively about the railroad but reached the conclusion that it is inspired by God and that the Europeans were just the medium through which this inspiration came to existence⁶ (al-'Amrawi, 1860/1989, p. 95).

If anything, the reaction of these diplomats reflects the prevailing opinion among the precolonial Moroccan elite which faced European superiority with astonishment and aversion, yet barricaded itself behind religion to compensate for its weakness. John Drummond-Hay fittingly remarked that:

[...] the Moorish potentate conceive, like the Chinese, that his safest course is to avert the monster innovation, and to trust to the jealousy of Christian powers, and to Een-Shaal-lah [God willing] for the endurance of his empire (Drummond-Hay, 1844, p. 73).

The Moroccan historian El Mansour explains that Morocco's precolonial system of government was handicapped by its legacy as the oldest and largest political entity in the Islamic West. The sultan and his 'ulama were conscious and proud of their heritage that they developed a sense of cultural self-sufficiency which made them uninquisitive if not indifferent to the developments that were taking place in nearby Europe as well as Egypt and the Ottoman Empire (El Mansour, 1989, p. 45). Hugh Stutfield expressively depicts the close-mindedness of Moroccans and the hopelessness of reforms:

Here the spiritual authority dominates everything, being indissolubly united with that of the State. Every intellectual aspiration is crushed; all must think in one groove, and you depart therefrom at your peril. [...] Hence al scientific investigation is rigorously tabooed. The mysteries of the universe are in the keeping of Allah, and it would be impious to pry into them. The puerile fancies of the cosmogony of the Koran are sufficient to satisfy the most learned men in Marocco. It is the same with all material improvement. [...] My chief object in making these remarks is to show the utter hopelessness of expecting better things under the present System (Stutfield, 1886, p. 169).

This is not to say that the Moroccan sultan and his circle of 'ulama rejected all types of European innovations. They were willing to adopt novel technology as long as it empowered the Makhzen militarily and economically and not undermine its sovereignty over the country, but also to prevent potential unrest by a starving population through the mechanization of flour production (Holden, 2010).

Steamboats were purchased in an attempt to protect Morocco's coast from contraband and piracy. A number of steam mills were established in several cities to alleviate the shortage of flour during drought years. Most importantly modern military equipment was purchased to help the Makhzen quell rebellious tribes, and a gun factory was purchased from Italy and assembled in Fez. A sugar factory was also commissioned in 1862 to reduce the country's growing imports. But these projects were constrained by the availability of adequate native human capital. Precolonial Morocco severely lacked the qualified men that could undertake these projects let alone operate them on a day to day basis. When the Marrakech sugar factory was completed the majority of those employed were slave-soldiers, but these *buakher*

lacked any technical expertise and were underpaid; they often resorted to stealing and sabotage to escape work. Mohammed Ennaji (1994) explains that technological modernization failed due to four obstacles. First is the absence of an encompassing, coherent and well-thought development project. Second is the failure to train local technicians who could have become a vector of technological transfer. Third is the absence of 'innovative currents and profound needs of transformation'. Finally and most importantly is the archaic supervision of the Makhzen's traditional cadres.

The sultan and his elite's resistance to serious reforms is a classic example of what institutional economists refer to as "path dependence", which emphasizes the importance of history in shaping choices for states and societies. Douglass North explains that the reinforcement of a set of institutional arrangements over time raises the cost of changing them. He argues that most public institutions exhibit increasing return to scale and network effects, making it very difficult for rival institutions to emerge even if they demonstrate superior qualities. Moreover, existing institutions tend to generate biased feedback loops that confirm prior institutional expectations about them rather than providing exposure to and information about institutional alternatives. In addition, vested interests both within and outside the existing institutional regimes often derive substantial benefits from these regimes, hence creating concentrated sources of resistance to institutional change. All of these factors, according to North, tend to create strong forms of institutional path dependency that often render radical institutional reform impossible (North, 1990, pp. 107-117).

Douglass North does not exclude the unlikely possibility of sudden revolutions or charismatic leaders that may offer the opportunity of a decisive break with the past. This was the case of Japan in the middle of the 19th century when a group of young and vibrant military leaders and bureaucrats realized that Japan could safeguard its independence as long as it was still tied to its feudal past. They had very few ties with the feudal establishment and were determined to pursue every effort towards new directions for the Japanese society and one of these was the elimination of the class structure that had long defined Japanese society (Morishima, 1982, p. 75). But in a country where temporal authority is tangled with religious legitimacy and a strenuously conservative population, the prospect for a break with the past is dim. The American historian and diplomat Stephen Bonsal visited Morocco in 1893 and eloquently summed-up the rigidity of the Makhzen system:

I would welcome as warmly as anyone the reform, if not the total abolition, of the iniquitous institution, but it has always struck me as rather absurd to ask the Sultan to abolish an institution which is

regarded in his country and by his people as quite as worthy and commendable as with us the holy state of matrimony (Bonsal, 1894, p. 334)

So what is the Makhzen and how did it develop since the emergence of the Alawi dynasty? Michaux-Bellaire (1907) built a theory of the Makhzen as a despotic authority maintaining social disorder to preserve its own arbitration power. Today, this analysis is echoed by some authors, including John Waterbury (1970), but is criticized by others such as Germain Ayache (1979, p. 5). According to him, the Makhzen could not have survived so long on the basis of violence, it was actually accepted and supported by the population as it carried a set of social and political tasks necessary for the survival of society, especially in the towns and their adjacent countryside. The Moroccan historian Abdallah Laroui describes the precolonial Makhzen as the group of people who chose the sultan and execute his decisions. He gives two definitions: in a restricted sense, everyone who received a salary from the treasury; in a broad sense, the Makhzen included all groups in which the members of the Makhzen in the strict sense were recruited and these include the *khassa* (aristocracy), *guich* tribes, sharifs and marabouts (Laroui, 1977, pp. 120-125). In any case, the Makhzen remained a rigid institution whose main *raison d'être* was to maintain the status quo which guarantees their remaining in power. For this reason Hugh Stutfield expressed his hopelessness of reforms when he wrote that 'all ideas of reforming from within the system of organized iniquity that calls itself a government should be brushed aside like so many cobwebs' (Stutfield, 1886, p. 170).

There were elements in the Makhzen who saw the benefits of reform and attempted to solicit the rest to implement them but their efforts went in vain given the rigidity of the existing system. This was the example of Mohammed al-Khatib al-Tetouani, a Makhzen minister, whom John Drummond-Hay described as:

always upright and honest, and ready in every way to promote any reform or improvement in the system of Government in Morocco; but after some years, he obtained permission from the Sultan to retire, because [...] he found the work too hopeless, fighting against the constant intrigues and ignorance of the Sultan's Ministers, and that he was too old for such a task (Drummond-Hay, 1896, p. 181).

There was also the once foreign minister Sid Mohammed Barghash who stood in 'great contrast to the Vizir' as 'a man of rare integrity and comparative enlightenment' (Stutfield, 1886, p. 260).

With the dawn of the 20th century, the composition of the Makhzen had drastically changed compared to what it was in the middle of the 19th century. With the death of last remnant of the old system Ba Hmad in 1900, the new generation of Makhzen officials was more willing to implement reforms such as the *tertib* tax and even consider the possibility of a European Protectorate. Moreover many of these Makhzen officials had joined the ranks of merchants in acquiring consular protection, which sheltered them from the wrath of the sultan and the ensuing expropriation. A document of the British Foreign Office reports that the 'French are extending their protection, official or officious, on a wholesale scale to Makhzen officials of all categories, from vizirs and governors downwards' (Kenbib, 1991). The minister of foreign affairs Abdelkrim Bensliman became a French protégé and was therefore a staunch supporter of French interests in Morocco, while Mehdi el-Mnebhi who held the sensitive ministry of defense acquired British protection which enabled him to amass a vast fortune through unscrupulous means without the fear of imprisonment and expropriation. Even religious figures such the Sharif of Ouezzan who was venerated as a holy man in the north of the country gained French protégé status in 1884 and struck a secret deal with France to replace sultan Hassan in case this later is ousted. In the south, the marabout of Tazeroualt was granted consular protection by the Germans who were seeking to extend their influence and challenge French colonial interests (Bidwell, 1973, p. 134). The hopelessness of reform was poetically summed-up by Abdelhafid, the last sultan of precolonial Morocco, after signing the Protectorate Agreements in 1912:

أأمر بالقتال وجل قومي يرى أن الحماية فرض عين

How could I declare war [on the French] whilst most of my people see the Protectorate as a religious duty?

2. The tribe

When French journalist Gabriel Charmes visited Morocco and observed the degree of independence many of its tribes enjoyed, he wrote:

And there are people in Europe who speak of a Moroccan government as a European government! And who could imagine that the sultan, in his country, has only to give orders to have everyone do just what he wants! They speak endlessly of his despotism: they have no idea how limited his reach, if not his intensity, really is! (Charmes, 1887, p. 106)

The discussion on the institutional obstacles to the modernization of Morocco in the precolonial period would be incomplete without reference to the tribe as an

institution that governed most social, political and economic aspects of rural communities. The reclusive and seditious character of many tribes had detrimental consequences on the modernization prospects of the country. European travelers saw tribalism as a curse that kept Morocco in the margin of world civilization:

So it was in ancient times, when this tribal system and internecine strife, the curse of Africa, kept them split up into separate clans [...]. This, no doubt, accounts in a great measure for the unimportant part they have played in the world's history. It certainly does seem remarkable that such a people [...] should have remained in such a state of utter stagnation, and have had so little influence on the destinies of the human race (Stutfield, 1886, p. 120).

So what is a Moroccan tribe and what role did it fulfill in the precolonial period? But most importantly, how did it stall the country's modernization prospects?

Tribes are reminiscent of our time as hunter-gatherers. In a hostile and unpredictable environment, the first humans learnt that cooperation within a kinship group offered advantages in hunting, warfare, and migration which improved their chance of survival. Barbara Freire-Marreco and John Myres saw tribes as 'a group of a simple kind, nomadic or settled in a more or less definite locality, speaking a common dialect, with a rude form of government, and capable of uniting for common action, as in warfare' (Freire-Marreco & Myres, 1912, p. 156). For Evans-Pritchard 'a tribe is the largest community which considers that disputes between its members should be settled by arbitration and that it ought to combine against other communities of the same kind and against foreigners' (Evans-Pritchard, 1940, p. 278). The tribe can thus be considered as the very first institution conceived by the human species to overcome the problem of uncertainty whether emanating from the environment or from hostile foreign groups.

With the Neolithic Revolution in the river valleys of the Middle East, tribes evolved according to the type of agriculture practiced. Tribes in irrigated regions functioned differently than those that practiced rainfed agriculture; the former being more hierarchical and requiring a higher degree of institutionalized collaboration. The difference between settled agriculturalist and nomadic pastoralist tribes was even starker and would shape the history of the Middle East and North Africa for centuries⁷. In Europe, tribalism among the newly Romanized Germanic people was gradually replaced in the early Middle Ages by the institution of feudalism where a lord provided protection to peasants in exchange of *corvée* work (Johnson & Earle, 2000, p. 311). Feudalism was key in the stratification of medieval European society and a prerequisite stage in modern state development. In Japan, the transition from a

tribal to a central state came about slowly through a series of legislative measures borrowed from neighboring China starting in the 7th century (Foote, 2007, p. 11). These measures strengthened the bureaucracy and helped establish a pseudo-feudal society governed by a warrior class that reported to the central government in Edo.

As elsewhere in the world, the tribe in precolonial Morocco was a socio-political institution that united peasants to the task of defending their land and livestock against neighbors as well as the predation of central government and ensured their survival at time of scarcity. To achieve this aim, tribesmen were known for their *'assabiya* or absolute solidarity with members of their kinship group⁸. The Moroccan 'alim Ali Tassouli (d. 1842) described the tribes of his time:

You will not find a tribe that does not protect its members, and is blindly solidary with them. They do not condemn each other for the evil they have done, and they do not force the wrongdoers amongst them to abide by the [Islamic] law when sued by those wronged. Furthermore, if the ruler sends for their wrongdoers they hid them, and send back the messenger disappointed and perhaps fight him and expel him. They set up raids and attack the roads, and the only thing that prevents them from engaging in evil is the persecuting hands of despots and tyrants (Saleh, 1996).

A great deal has been written on Moroccan tribes and their role in shaping the country's history. Robert Montagne (1952, p. 20) asserted that a Moroccan tribe is *'le territoire d'un groupe humain défini'* while Jacques Berque (1954b.) explained that a North African tribe is an amalgam of many kinship groups each claiming to have come from somewhere else⁹, rather than a homogenous group sharing a common ancestor. Ernest Gellner (1969) explained that Moroccan tribes are "segmentary" in the sense that tribal sections, sub-sections and so forth have roughly the same kind of social reality as does the tribe itself. For Waterbury the tribe in Morocco 'is above all a mechanism by which a number of segments collectively exploit a sector of strategic resources' (Waterbury, 1970, p. 64). The segmentary character of Moroccan tribes was also held by Paul Pascon (1979) who through his field work concluded that 'the tribe seems to be a political association between lineages founded on socio-economic necessities'. Robert Bidwell simplified the concept of a Moroccan tribe as 'a group of people who have come together for various historical, social and other reasons, and who are united because they believe themselves united' (Bidwell, 1973, p. xiv).

Intertribal conflict was common, yet it has been argued that feuds and wars, far from promoting disintegration of the tribal system, provided in fact the main force and impetus which kept it going (Hart, 2000, p. 12); this is why Robert Montagne

(1973, p. 46) categorized Moroccan tribes as 'systems of organized anarchy'. Moreover, tribal structures are generally self reinforcing institutions that often resist their replacement by alternative arrangements of rural society, especially if they are less egalitarian and more hierarchical:

[...] tribalism is an evolutionary cul-de-sac, part of a spasmodic cycle that in and of itself lacks the institutional raw materials capable of leading to more complex forms of polity (Fried, 1967, p. 173).

This was the case of the *iqta'* (fiefs), which were conceded starting in the 12th century by Moroccan sultans to warlords so that by the 15th century they became an established institution; however, they remained limited 'because tribal cohesion prevented the holders of *iqta'* to evolve toward a more or less feudal system' (Ben Ali, 1983, p. 57).

The standard Moroccan tribe tended to be acephalous (lacks an overall chief) and had power more or less equally distributed among its factions and sub-factions; only in few instances that a qaid emerges as a powerful leader and usurps land from his fellow tribesmen, monopolize political power within the tribe and subjugate its members to some extent. In 1900, Weisgerber observed in the Chaouia that 'some qaids were powerful personalities living in formidable castles surrounded by their families and servants who acted as their men of arms', while others such as the Zyaïda 'lived under the tent in the same manner as those they administer and have no more authority than the sheikh who is freely elected' (Weisgerber, 1935, p. 8).

Among the powerful qaids were those who controlled strategic mountain passes and enjoyed a quasi-independence from the Makhzen and its interference and were able to extend their influence over the adjacent valleys. On the other hand, some tribes in the High Atlas lived the democratic and egalitarian ideal far from Makhzen authority and the influence of a feudal qaid. Robert Montagne observed with astonishment how:

It is impossible to distinguish between a poor man's house and a rich man's. Each of these little mountain cantons forms a separate state, administered by a council. The village elders, all clad alike in brown wool garments, meet on a terrace and discuss for hours on end the interests of the village. No one raises his voice and it is impossible from watching them to discover who is their president (Montagne, 1930, p. 131).

As in any patriarchal society, Moroccan tribal groups were dominated by men; they attended the *jma'a* (tribal council) and bore arms to fight against the enemy. Although

women worked far harder and longer hours they had little say in tribal affairs and in most tribes never received their prescribed share of the inheritance¹⁰.

Robert Montagne (1953, p. 43) claimed that there were approximately 600 distinct tribal units in Morocco at the dawn of the 20th century, and they were far from homologous. On the one hand, they were tribes that accepted the sultan's authority and the governors he appointed; they paid taxes and supplied his army when it crossed their territory. These tribes constituted *Bled al-Makhzen* (the land of government) which covered not much more than the Atlantic Plains, Souss and the pre-Saharan river valleys, all of which are easily accessible and deprived of natural barriers. Stephen Bonsal reported that 'the Sultan finds that only the inhabitants of the most exposed valleys whose homes are most accessible to his army ever think of paying taxes'. On the other hand, the *Bled as-Siba* (land of dissidence) was the realm of rebellious tribes that constantly resisted paying taxes and harassed the country's urban centers and trading arteries. These were mostly in the Atlas Mountains and the Rif, but also in the densely forested areas in the Atlantic Plains where tribes such as 'Zimoors, the Zair, and the Beni-Hassan, and scores of other nomadic tribes kill his [the sultan's] tax-gatherers and rob his caravans' (Bonsal, 1894, p. 60).

The most evident economic consequence of tribalism in precolonial Morocco is the state of insecurity it engendered which discouraged agricultural investment and raised the cost of trade, further entrenching the "subsistence ethic" into the rural population. When visiting the tribe of Beni Hsan in the Gharb, Stutfield observed that:

In these parts, everybody carries weapons all day. The people market armed to the teeth, and the plowman drives his bullocks with his sword buckled on and his long gun laid by ready for use. The flocks are never left out by night, and in the day are tended by armed shepherds (Stutfield, 1886, p. 179).

Except for their tent, livestock and rudimentary tools, most peasant communities in the Atlantic Plains possessed nothing that resembles physical capital which could improve agricultural productivity. Everything the peasant household possessed was transportable on pack animals in case hostilities broke with neighboring tribes. William Lemprière observed how these tribes could pack all their belongings on their animals and move if necessity calls for it:

I met one of these tribes upon their march, and observed that not only their camels, horses, and mules, but also their bulls and cows, were laden with their tents, implements of agriculture, wives and children (Lemprière, 1793, p. 38).

The propensity of tribal conflict increased at times of scarcity when whole tribes engaged in looting against their neighbors as well as cities in search for food. Although under Makhzen authority, the plains adjacent to *Bled as-Siba* were the most affected by looting. Segonzac described the tribes of the western Rif, the Jbala as:

[...] incorrigible looters. They descend in bands from their mountains and raid the herds of the people of the plain, besieging cities and villages. They slay the men, take the women and children; they sell them like cattle in their markets. They provide as an excuse [for their actions] the contrast between their miserable country and the rich neighboring plains (Segonzac, 1903).

This had forced smaller tribal groups to coalesce and unify into armed tribal confederations in order to protect themselves from the raids of neighboring dissident tribes. In the Chaouia for example, the aforementioned Mzab and 'Achache developed a notorious martial tradition despite being in *Bled al-Makhzen*:

Due to this location that the tribes of Mzab have always been at war, surrounded by belligerent neighbors, they were all the time in a buffer state between the Chaouia [tribes] and the warlike populations of the east and the south (Mège, 1918).

As already noted, the remarkable persistence of the weekly market and yearly fair resides in the complex structure of Moroccan tribes which inhibited the development of daily market places and the emergence of towns. Although there were villages and small towns within the territory inhabited by a tribe, it was impossible for permanent market places to be established in them because of the hostility that opposed tribal segments which discouraged the members of one tribal group from crossing the territory of their neighbors. Thus, only neutral places that are often uninhabited and considered as sanctuaries (*mahram*) could accommodate a trading platform for the adjacent tribal segments¹¹. It is not a coincidence that most weekly markets and yearly fairs are near the tombs of a marabout (Fogg, 1932).

Given its limited human and technical resources the sultan and his Makhzen were often incapable of overcoming the seditious tribes in *Bled as-Siba* who knew how to use the terrain to their advantage. Moreover, the mid-19th century saw the proliferation of modern weaponry among the rebellious tribes which further emboldened them. Even in the Atlantic Plains where the Makhzen was more successful in subduing tribal conflict, the sultan's policy was to take advantage of the feuding tribes by imposing heavy fines instead of establishing permanent military posts to police the countryside and reduce the possibility of future tribal conflict. A number of European travelers alluded to this strategy of "divide and rule" as an

unofficial policy followed by the sultan to weaken the tribes and reinforce his authority over them:

It is even a part of his policy to maintain and provoke these misunderstandings; they are the safeguard of the despot, and seldom fail to turn to the advantage of his treasury (Chenier, 1788, p. 316).

If anything, the sultan's "divide and rule" policy reinforced tribal cohesion and further exacerbated their consequences on the modernization prospects of the country.

After witnessing the sultan's impotence in subduing tribal feuds that constantly plagued the country, Segonzac (1903) reached the conclusion that there is no hope for Morocco to prosper independently, so what the country needed is 'the tutelary protection of a master able to pacify its populations and develop its [natural] wealth'. He understood that the sultan lacked the resources to undertake such a task, most importantly a substantial army whose only allegiance is to him. This was also the opinion of Robert Montagne who remarked that the state of anarchy was due to the 'absence of a repressive body, detached from the population who would be able to overcome "disorder"' (Montagne, 1930, p. 227). To acquire and maintain such a repressive body requires a regular flow of fiscal receipts in the form of agricultural taxes that could be efficiently collected. This was unfeasible in precolonial Morocco given the vagaries of the weather and the frequency of demographic crisis, in addition to operational obstacles as noted by A. Rey:

Major obstacles inhibit the maintenance and organization of a standing army. All provinces are not part equally supplied with barley, and hay is in shortage. To compensate, there are only pastures. The army can only gather on a single point in two fixed times of the year, and it cannot stay long in the same place. [...] Thus a campaign is delayed or suspended in the middle of the most urgent circumstances [...] (Rey, 1840, p. 653)

With such irregular tax receipts, Moroccan sultans had to rely on particular tribes to provide military service in exchange of the usufruct of Makhzen land. The Oudaya were among the biggest guish tribes and these peasant-soldiers proved to be an inexpensive auxiliary to the permanent army made predominately of *bouakher*, black soldiers descendant of slaves brought from the Sudan. However, the guish system had its downside as it increased tribal frictions and animosities, especially after the death of a sultan and the ensuing struggle between two or more pretenders to succeed him. Roger Le Tourneau wrote about the dilemma of guish tribes:

When the sovereign was capable of establishing order, they appeared as the best support of the establishment; however, as soon as the sovereign lacked energy or worse became a creature of the tribe, these Arabs regained their old instinct of plundering Bedouins (Le Tourneau, 1949, p. 85).

The discussion on the resilience of the tribal system and the sultan's inability to maintain his authority over many parts of the country reveals the antagonism between the egalitarian tribe and the stratified institution of government, without which modernization is impossible. This is why modernization was considered by many as antithetical to tribal culture and social organization, and would either wipe them away or else be itself blocked by forces of tribalism. Morton Fried argued that this antagonism lies at the heart of the political evolution of human society:

It is the task of maintaining general social order that stands at the heart of the development of the state. And at the heart of the problem of maintaining general order is the need to defend the central order of stratification [...] one means of doing this is to indoctrinate all members of society with the belief that the social order is right or good or simply inevitable. But there has never been a state which survived on this basis alone. Every state known to history has had a physical apparatus for removing or otherwise dealing with those who failed to get the message (Fried, 1967, p. 230).

The sacred character of the sultan as a direct descendant of the Prophet and the continual allegiance he received from the 'ulama was obviously not enough to extend the "central order of stratification" over the unruly tribes in the absence of a "physical apparatus" embodied by a powerful and permanent army.

Another consequence of tribalism is that it made rural society poor in social capital, a broad concept that refers to the norms that shape the quality and quantity of a society's social, political and economic interactions. Tribalism engenders a high level of cooperation and mutual help among members of the same kinship group but this is purchased at the price of hostility and mistrust towards members of other groups. Using the words of Lawrence Harrison (1985), Moroccan peasants had a very narrow 'radius of trust', the circle of people among whom co-operation is possible. Anyone outside this radius would be treated with lower standards of behavior:

The ill effects of strong family prejudices, and of that narrow and exclusive disposition which accompanies them, is strongly marked in these little societies. Every camp beholds its neighbour with

detestation or contempt [...] they will not permit a person who is not in some degree related to them to inhabit the same camp with themselves (Lemprière, 1793, p. 41).

Criminal behavior such as stealing was tolerated and even praised if it is directed toward another tribal group. Michaux-Bellaire (1913) explained how livestock stealing was a common activity that involved all classes of society:

[...] the theft of livestock in the Gharb, as in other Arab regions, is in effect a sport, a war exercise that the sons of the best families do not disdain to engage in to prove their courage and skill (p. 45).

More appalling to the European observer is the existence of an extra-legal institution that settled theft cases without the involvement of Makhzen officials (p. 155).

This had reduced the ability of tribesmen to engage in commercial ventures with outsiders, especially urban merchants and artisans who may possess redundant capital. Some tribes such as the Ait N'dhir near Fez were prohibited from entering the city and frequenting its markets (Abès, 1917). As already noted, Fassi merchants and craftsmen preferred to use their profits to buy dwellings or gardens within the city rather than entrust them to tribesmen for agricultural enterprises. The only exception was the wealthier merchants who, thanks to Makhzen protection acquired land in the vicinity of Fez and hired tenant farmers to exploit them:

Most of the bourgeois of Fez own a farm in the countryside so that the provision of the city in foodstuff takes the shape of a rent which is paid by the neighboring farmers (Célérier, 1934).

But these agricultural exploitations were never considered as business enterprises that necessitate investment to increase their production:

The sumptuous residences of Fez were built with the grain of the Pre-Rif. Nothing is invested in agricultural production and the funds allocated in the rural areas are only used to expand land or livestock. Rural investment is nothing but a capital placement whose owner only expects the rent (Lazarev, 1966).

Moreover, city dwellers were generally wary of tribes and held a low opinion about their character (Célérier, 1948, p. 96). For example, the nineteenth-century historian Mohammed Akenous wrote that the majority of the rural folks 'would not distinguish between what is right and what is wrong if it was not for their fear of the sultan' (Akenous, 1876/1994). The fact that all Moroccan cities and towns were surrounded by walls and their gates closed at night are a clear indicator of the level of distrust the city folks had toward the tribes.

In addition to its economic consequences, tribal conflict had repercussions on the environment. Large swaths of forest cover were burnt because they constituted hideouts for rebellious tribes (Hooker et al., 1878, p. 178); this has caused soil erosion in the deforested areas and the silting of river estuaries which had rendered the ports of Azzemour and Mehdiya inaccessible for large vessels. Ibn Zaydan (1929) tells us the story of the Reḥamna tribe whose land lay between Marrakesh and El-Jadida (Mazagan); they had been in a state of rebellion throughout the 19th century and constantly harassed Marrakesh and its neighboring markets. Only when the Grand Vizier Ba-Hmad ordered the burning of their forest in 1894 that the Makhzen was finally able to subdue their rebellion.

The endurance of tribalism as a socio-political institution with extensive economic ramifications is an important theme in Moroccan history. Kenneth Brown (2001) explains that there are three essential factors that explain the entrenchment of tribalism among the precolonial rural population. First, tribesmen often held economic resources, namely land and water, collectively and when they passed them to the next generation this later had to maintain the same communal arrangement of these resources since it would be costly to modify it. Second, inter-tribal conflict as already mentioned maintains a culture of vendetta that can only be carried effectively by a powerful tribal group. Finally, tribalism was convenient to the Makhzen for fiscal purposes as taxes could be levied on subdued tribes according to their size and the land they occupied. We could add to Brown's thesis the role of subsistence crises in reinforcing kinship ties as they provided a channel to spread out the risk of a bad harvest or a devastating epidemic. These forms of mutual help constituted the bedrock of social interaction between member of the same tribal group as they guaranteed its survival and reproduction. Writing about Moroccan peasants in the early 20th century, Lazarev eloquently stressed the importance of kinship ties in the precarious Moroccan agrarian system:

[...] the majority of peasants were objectively poorer than today. Their subsistence economy was largely autarkic and was periodically affected by the vagaries of weather. Yet these peasants had a wealth they lost today, that of relative security provided by their social system. There were no doubt inequalities between families—though probably less than today—but community relations, redistribution mechanisms of the factors of production through agricultural associations, mutual aid during famines tended to offset these inequalities (Lazarev, 2013, p. 389).

The persistence of tribalism throughout the history of Morocco can also be linked to what Jacques Berque (1938, p. 201) refer to as the “divorce” between the city and the countryside. He explained that Western Europe witnessed after the collapse of the Roman Empire a movement of city dwellers toward the countryside that gradually led to the creation of a ‘class of rural lords, living on their land, among their peasants’. According to Berque, this greatly contributed to the emergence of feudalism and the demise of kinship ties in Western Europe. The emergence of feudalism in Europe is much more complex than Berque suggests; there were feudal lords that owed their fiefs to military achievements such was the case in England after the Normand conquest. What Berque failed to mention is the role of Christianity and the medieval Catholic Church in instituting ‘marriage laws and practices that undermined kinship groups’ so that by the 8th century ‘tribes were no longer institutionally relevant’ (Greif, 2006). Moreover, the Islamic polities that emerged in Morocco heavily relied on a wealth finance system based on coveting trans-Saharan trade rather than a staple finance system based on extracting agricultural surplus¹². With such a finance system, Moroccan dynasties established garrison towns to facilitate caravan trade and their control of was more important than subduing the countryside and its tribal inhabitants.

Chapter 8: Cultural Impediments to Modernization

*We sailed out of the bay [of Tangiers] with a fair wind, heartily joyful
we were out of the power of a wretched and faithless people.*

John Braithwaite (1729, p. 325)

Studying the cultural obstacles to economic growth in a pre-industrial society is not as straightforward as it sounds and may lead to controversy. Culture is a concept difficult to define as it covers many aspects of human behavior such as the relationship between individuals and groups, but also between ideas, notions and identities. Besides, it is hard to quantify a society's current cultural traits let alone those it had over a century ago, and assess their economic consequences both positive and negative.

Pre-industrial societies possessed cultural traits that are a direct result of their natural environment and the economic mode of exploitation it imposes on them. As already explained, the precarious environment of precolonial Morocco and the lack of population pressure maintained extensive systems of agriculture where livestock raising takes an increasingly important place in marginal land and in the vicinity of forests. Herding societies throughout the world are characterized with what sociologists refer to as "culture of honor" in which the slightest threat to one's property is dealt with disproportionate violence. This is because a herdsman is 'under constant threat of ruin through the loss of his animals [...] he has to make it clear, through his words and deeds, that he is not weak' (Gladwell, 2008, p. 166). In precolonial Morocco, tribes who relied primarily on livestock were far more hostile than fully settled peasant communities that engaged in permanent farming, and were always the instigators of tribal unrest. Jacob Black-Michaud (1975) explained that herding is an activity that is practiced in regions where geography and low population density conspire against the ability of central governments to enforce laws, so feuds become the only way to maintaining order; thus it should be no surprise that feuding societies of the world are preponderantly herding societies. This "culture of honor" contributed to the state of insecurity that plagued Morocco as herding tribes were scattered around the country and constantly threatened neighboring settled rural communities and cities.

Other cultural traits are intertwined with the environment where they initially developed so it is difficult to determine their effect on the material condition of society. For example, the extreme poverty and wretchedness of most rural communities can be attributed to their archaic farming methods and climate irregularity, but why did not these communities strive to improve these methods so to cope with this irregularity? Poverty in pre-industrial societies breeds a culture that perpetuate and strengthen the economic patterns which already exist as noted by John Friedmann (1954). He argued that in these societies poverty is an almost universal and everyday experience that is accepted as a “natural” condition of life resulting in weak incentives to escape it or at least alleviate its effects.

To the Europeans who visited Morocco in the precolonial period, peasants appeared as lazy and fatalist: they accepted their poverty and were not willing to sacrifice their hard work to fully exploit their country’s bountiful resources. They saw the tent and the semi-nomadic lifestyle of the Arab peasants in the plains as symbols of their indolence and contrasted it with the industriousness of the settled Berbers who were able to turn their narrow mountain valleys into fertile gardens. In the first years of the Protectorate, Théophile Monod (1914) wrote about Moroccan peasants:

The native, under the influence of his race and religion, happily accepts years of plenty, suffers with resignation years of misery, but makes no effort to change the natural order of things, and lives as a good fatalist. Confident of his stupid "Mektub", he knows one law, that of minimum effort and minimum work.

Similar observations were made about people in the cities. John Braithwaite (1729, p. 126) observed rhetorically in Tetuan that if ‘one sees the number of idle people sitting in the streets from morning until night, a stranger is amazed at how they live’ while Stephen Bonsal (1894, p. 39) sarcastically wrote that the people of Fez ‘are addicted to lying and to prayer, and to passing their days in industriously going to mosque, or indolently lolling in the sun’. Clearly there is much exaggeration in these statements; precolonial Fez and Tetuan were bustling with workshops and their artisans were esteemed in Morocco and the rest of North Africa:

In this society, artisans are many and hold a considerable position that no prejudice could discredit their status, they often have first place in the brotherhoods, and many are even Chorfa, like the most notable people. These people have no other materiel interests than those of their trade (Galotti, 1924).

More importantly, Fez and Tetuan were home to many successful merchants who were willing to take on risk and engage in long distance trade whether by caravan or by sea once peace and security conditions permitted.

The Fez merchants were by far the most represented group in the commercial elite of the country and they have been instrumental in Morocco's commercial intercourse with the rest of the World. The colony of Fez merchants in Cairo is an early example of the legacy of these precolonial entrepreneurs (Abdul Mu'ti, 2005). As already noted, the trans-Saharan trade was almost monopolized by merchants from Fez who organized and financed caravans exceeding 1,000 camels. In the second half of the 19th century when the trans-Saharan trade collapsed in the aftermath of the French penetration into the Niger Bend, Fez merchants did not stand idly. A number of them travelled to the Senegalese port of Saint Louis and established business there importing Moroccan craft products such as leather footwear to sell them throughout West Africa (Akmir, 1994). Finally, with the intensification of maritime trade Fez merchants would play a crucial role in introducing European manufactures to the Moroccan market. René-Leclerc wrote about them:

The Fez merchants did not wait for Europe to come to them, in which case they undoubtedly would have waited a long time. The principal wholesale merchants are in direct relations with the large European trading houses, or they appoint in the big ports [in Europe] agents who are their partners (René-Leclerc, 1905, p. 11).

Another entrepreneurial group in Morocco were the *Soussi* or *Swassa* who gained a reputation throughout the country for their hard work, thriftiness and business acumen. The parsimony of natural resources and the insulation from ravaging epidemics made the Anti Atlas valleys a reservoir of men willing to seek their fortune elsewhere. As early as the 11th century, the Arab geographer al-Bakri wrote that the inhabitant of the Souss were the 'most industrious of men and most ardent in the pursuit of wealth'. Stutfield (1886, p. 275) remarked that 'their energetic character leading them to seek their fortunes further afield, are a clever, active, and intelligent set, more apt than the Moors at learning the arts and habits of civilization'¹. They established groceries (*baqal*) in the port towns and relied exclusively on family members to expand their petty businesses. In the early years of the Protectorate, Henry Dugard (1917) wrote that the Souss possesses an 'intelligent, very active and very dense' population of 6 to 700,000 and many of the men go as far as Algeria and Tunisia to work in the mines².

Does the energetic spirit of these groups exonerate them from fatalism? Not necessarily. One could be a fatalist (i.e. believe that all events are predetermined and

are therefore unalterable) yet strives to earn a living in whichever mean is accessible to him. Accepting that all events are predetermined is a natural psychological response in a precarious and highly unpredictable environment where people have little control over their fate and death by starvation and epidemics is common. Jackson (1810, p. 154) relates the story of a Fez merchant whose repeated misfortunes never inhibited his resolve to trade despite his acceptance that such misfortunes were prescribed by God³.

Moreover, the observed indolence of Moroccans might not be a cultural choice but an economic inevitability in a subsistence economy that has never been stimulated by sustained population growth or a polity that forcefully exploits its subjects to extract as much surplus from them. In other words, in an under-monetized rural economy with very limited consumption choices, peasants had little incentive to expand their labor effort in backbreaking agricultural activities, especially if a leisurely option was available. This also applies to urban occupations as the stagnating rural population with its modest agricultural surplus would never expand its demand for urban-made craft goods. Urban craftsmen had long understood that expanding production would only lower prices, so they established guilds to prevent this from happening. With the advent of the Protectorate and the insertion of the Moroccan economy into the French colonial market, Moroccan peasants had shown a disposition for hard work and a willingness to make sacrifices to improve their material condition. Many moved to the coastal cities to seek permanent work in construction, manufacturing and services; others found employment in France working long hours often in hazardous conditions. Townspeople too displayed their business acumen and willingness to modernize production methods as they participated in the economic development brought by the French Protectorate (Colrat, 1917).

One would also add that Moroccan peasants had a frugal diet consisting mainly of carbohydrates while their intake of animal protein was very inadequate; many of them were susceptible to chronic diseases that weaken the body and constrain its ability to perform hard work:

Of course, there are regions where men are plagued by malaria, and where we find thinned populations, listless, unfit to work intensely and continuously. There are also tribes in the mountainous areas whose lifestyle does not protect them from cold and tuberculosis. In the south, alas! There are many cases of quasi-permanent undernourishment. [...] Some say they are lazy: certainly, a sick,

undernourished, tired man will only make a prolonged effort if he considers it absolutely indispensable (Guillaume, 1955, p. 24).

Finally, observers from rapidly industrializing societies such as Britain, France or the United States would have had the logical tendency to characterize pre-industrial societies they visited as indolent. During his stay in Japan in the early 20th century, the American missionary Sidney Gulick (1905, p. 447) described the Japanese as being light-hearted, free from all anxiety for the future and living chiefly for the present. Count Pecchio (1833, p. 209), an Italian exile who spent many years in England, described the industriousness of the English and contrasted it with indolence of the Spanish and other southern Europeans. He wrote that 'idleness is the luxury of the Spaniards [...] which is enjoyed by all, from the highest grandee to the most miserable water-carrier'.

Societies possess cultural traits that are independent of their natural environment and are either shaped by their religion or recent history which makes them very difficult to change. Superstitious beliefs are an example of a cultural trait that is resilient to change and pose an insurmountable obstacle to economic and social progress of communities and whole countries. As witnessed today in sub-Saharan Africa and Haiti, superstition prevents people from understanding the world around them and keeps them in a state of ignorance that is perpetuated by a deficient education system. There was no shortage of superstitions in precolonial Morocco and such beliefs were widespread among peasants and townsmen; they were institutionalized in the form of *fquih*s (witch doctors) who claimed to "reverse" magic and protect from the "evil eye" by issuing talismans and prescribing "remedies". Annual fairs were held around tombs of famous marabouts and pilgrims flocked to them to seek a cure for real and imaginary symptoms. Moroccan sultans were complacent with such practices, although they are frowned upon in Islam and even condemned as forms of heresy. Maybe they realized that superstitions and the accompanying sorcery are impossible to eradicate in an overwhelmingly illiterate society that lacks an institutionalized system of education as was provided in Europe for centuries by the Catholic Church. A French diplomat observed in his travel to Morocco that 'ignorance is so universal that we are quickly disgusted' (Charmes, 1887, p. 318). If anything, the widespread culture of superstition reflects how precolonial Moroccan society was not ready to embrace reason and the scientific progress necessary for economic modernization.

This un-readiness to embrace progress was compounded by a deep distrust of Europeans and anything that pertains to them⁴. This is a consequence of the long history of military encroachments that Morocco had with Spain and Portugal which

left a legacy of resentment toward “Christian” Europeans and legitimized their mistreatment. John Braithwaite (1729, p. 309) wrote that the Moors ‘are not at all ashamed of any tricks the play Christians [...] and that they will be sure to make a Christian pay severely for any business he comes to do in this country’. Other European travelers who encountered this aspect of Moroccan culture ascribed it to religious fanaticism; Hugh Stutfield questioned this assertion:

[...] I question whether what is called fanaticism is not very often a kind of shy dread and distrust of the Christian stranger, enhanced by the recollection of injury, rather than any depth of religious conviction. The best proof of this is the way it wears off with intercourse and kind treatment. Make friends with a Moor, and he will, especially if he be a countryman treat you every bit as well as one of his co-religionists (Stutfield, 1886, p. 163).

However, not many “Moors” had the chance to make friends with a European in the precolonial period, so the distrust and mistreatment would remain and even exacerbate as some Europeans and their Moroccan protégés abused their privileged status to extort peasants and swindle their land.

The few Europeans who dared to permanently settle in precolonial Morocco were Spanish and French soldiers who deserted their national armies; they had to publicly renounce their Christian faith and convert to Islam to escape persecution⁵. Many were employed by the sultan in his army and the artillery was often entrusted to them (Leared, 1876, p. 264); others wandered the country claiming to be doctors, living among the country folks and sharing their miserable living conditions (Godard, 1859, p. 44). In the Rif, Mouliéras encountered a number of Spanish deserters:

The renegade enjoys a consideration that in Morocco would certainly not be granted to the greatest man of Christendom; he skillfully takes advantage of his unique status to create for himself, while doing nothing, resources he had never dared to hope when he was a soldier (Mouliéras, 1895, p. 98).

Far from becoming agents of modernization, renegades melted in Moroccan society and never formed an influential group that can influence change. Never do we encounter in the history of precolonial Morocco the European pioneer who was willing to venture deep in the country and establish a new business, an agricultural exploitation or seek fortune in mining. For most of the 19th century, Europeans were confined to few coastal towns and could only venture into the interior with a special permit let alone establish permanent businesses. David Urquhart (1850, p. 378) reported the story of a French renegade who set up a ‘promising sulfur factory’ in Fez

but 'it was, by order of the government, leveled with the ground, and all the instruments destroyed, lest it should furnish a new attraction to the French'.

In comparison, Egypt was a much propitious environment for Europeans in the 19th century as Mehmet Ali Pasha willingly invited foreigners to settle there in order to contribute to its development. As they conducted business with Egyptians, these Europeans had an impact that went beyond immediate profits. Not only they introduced them to modern business methods, but they also influenced their tastes and facilitated the process of modernization, especially among the emergent native bourgeoisie. It is not a surprise that Egypt gave the Arab World its first modern colleges, newspapers, playwrights, and feminist movement.

Egypt's development in the 19th century owes also to the dozens of students whom the Pasha sent to study in France as well as other European countries to learn languages and study modern science and technology. On their return, they were employed in government and formed one of the pillars of reforms and modernization. In precolonial Morocco, sultan Abderrahman and his son Mohammed were more cautious to send their subjects to Europe, mainly due to limited financial resources but also out of fear they would become engrained by "Christian" morals and act as European agents on their return. Sultan Hassan was more adamant to develop native human capital but the fact that the quasi-majority of educational missions were for acquiring military and naval sciences reflects how the sultan was only interested in modernizing his army while maintaining the traditional aspects of his government and the socio-economic organization of his country⁶.

Primary education was also neglected in the decades of reforms and no attempt was made to introduce modern subjects in the traditional schools where the sons of merchants and notables learnt Arabic, the Quran and some arithmetic. Jews took advantage of their special status in Moroccan society to enroll their sons and daughters in the schools established by the Alliance Israélite Universelle: a charitable organization based in France to improve the lot of Jews in the Middle East and North Africa. By 1908, there were 18 A.I.U. schools in Morocco enrolling over 3,700 pupils all of Jewish confession. The first European school opened in Tangier in 1904 by a Frenchman—Mr. Perrier—who spent time in Algeria. Although the school's enrollment quickly rose to 110 students in 1908, only 3 of these were Moroccan Muslims. In the years leading to the Protectorate, the French government subsidized 4 modern schools—in Tangier, Larache, Casablanca and Oujda—that combined French and Arabic subjects for Muslim pupils; their enrollment stood at a modest 217, mostly the sons of notables on whom France would rely in its imminent colonial endeavor (René-Leclerc, 1908).

Conclusion

The purpose of this thesis has been to identify the fundamental obstacles that stood in the way of Morocco's modernization in the decades spanning from the conquest of Algiers in 1830 to the official establishment of the Protectorate in 1912. Our analysis is inspired by the three-hypothesis approach developed by a number of economic historians to study the success and failure of national economies. "Geography, institutions or culture", rather than determining which of the three is the culprit, this thesis explores how each of these "fundamental determinants" played its part in hindering Morocco's modernization and preventing its subjection to European colonization. So what are the broad lessons learned from this study?

The first lesson that must be drawn is that proximity to Western Europe was more of a bane than a boon to Morocco and the rest of the Maghreb. It is incontestable that this proximity spurred trade and led to the intensification of agriculture in the coastal areas, but it also made Morocco an attractive prize in the often-unchecked race for colonies; two military defeats, the payment of war indemnities, unscrupulous European residents and their protégés, as well as smuggled modern rifles, had eroded the authority of the Makhzen and consequently weakened its ability to induce significant economic reforms.

Second, the role of culture should not be exaggerated as a fundamental obstacle to economic growth in a pre-industrial society. Precolonial Moroccans were predominantly peasants living in a semi-arid climate that shaped their cultural attitudes as they incorporated its vagaries into their mode of agricultural exploitation and way of life, thus appearing as indolent and fatalist to contemporary European observers many of whom mistakenly thought these were inherent qualities of Muslims. Nevertheless, one cannot deny the role of history in shaping a society's shared attitudes, some of which can hamper its ability to "import" knowledge and technology from more advanced societies. The centuries-long military confrontation with Spain and Portugal had left a legacy of animosity and mistrust toward Europeans which would constantly haunt Morocco's shy attempts to modernize its economic structures. France's conquest of Algeria in 1830 and the subsequent destitution of its people by French settlers had only reinforced this animosity and made Moroccans, elite and populace alike, suspicious of European-style modernization.

Third, institutions played their part in Morocco's precolonial woes. But contrary to Timur Kuran's thesis, I argue that political and social institutions were far more potent obstacles to growth than the absence of commercial institutions such as corporate and usury law. The predatory nature of the Makhzen and the complacency of the religious establishment left no alternative for Moroccan peasants but to strengthen tribal bonds as a defense mechanism against the tyranny of the sultan and his appointees. The Makhzen, 'ulama, and tribe were the axis of a centuries-long system that condemned Morocco to a political, social and economic cul-de-sac. Morocco's isolationism vis-à-vis Europe during the 17th and 18th centuries helped keep the system almost intact; but once the country came under increasing European pressure, the system rigidified to finally erupt into violence, further condemning Morocco's hopes to safeguard its sovereignty.

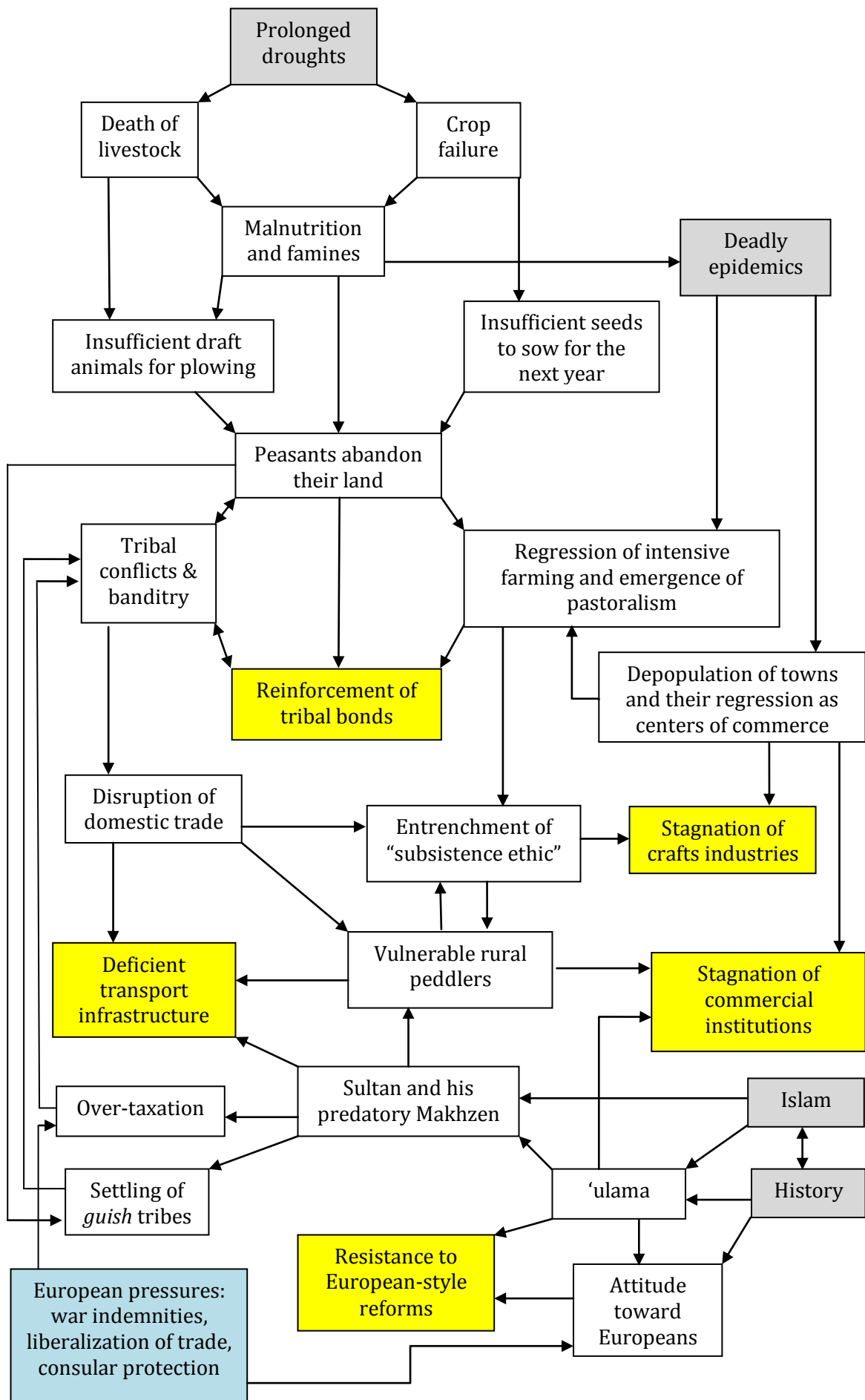
The fourth lesson we learn from this thesis is that Ester Boserup was right. Population pressure is the key economic determinant in pre-industrial societies. From the 14th century onward, Morocco had become a country of weak demographic pressure and this had led to (1) the predominance of extensive farming systems which underexploited agricultural resources and entrenched a "subsistence ethic" among the rural population, (2) the weakness of commercial exchange which inhibited the emergence of a rural merchant class capable of instigating institutional change, (3) the regression of urban settlements and the stagnation of their craft industries. Moreover, the increased propensity of droughts frustrated rural peace and often led to tribal warfare and a state of insecurity which further limited intra-regional trade and mobility. Although a short-lived prosperity was brought about in the late 16th century by the administratively-organized Sa'di dynasty, a series of epidemics and famines plunged the country into anarchy and dissipated its prospects of integrating the radical economic developments taking place in nearby Europe. By the 19th century, Morocco was an under-populated country whose mediocre economic structures were long accustomed to a subsistence level of production and governed by institutions incapable of achieving economic growth in its "Smithian" form let alone finance an ambitious modernization program necessary to fend off European colonial powers.

It is important to remember that economic growth is a complex matter, determined not only by the single effect of each of the factors but also by the interaction of two or more factors. The diagram below illustrates the feedback loops through which the aforementioned factors condemned precolonial Morocco to its economic stagnation and eventual subjection to the colonial interests of France and Spain. The boxes in grey represent the "fundamental" factors that had historically shaped Moroccan society: prolonged droughts, epidemics, history of conflict with the

Iberian powers, and the Islamic religion; without omitting the effects of colonialist pressures. Those in yellow represent the “proximate” outcomes which are tribalism, deficient transport infrastructure, inadequate commercial institutions, lack of an industrious class of artisans, and resistance to European-style reforms.

Finally and most controversially, the lesson I personally learnt from studying the economic history of precolonial Morocco is that modernization was quasi-impossible without foreign intervention. In my opinion, the country’s productive and institutional structures were too rigid to accept drastic changes the consequence of which was a redistribution of power from its traditional poles (the sultan, the ‘ulama, chorfa and quids) to an entrepreneurial class that increasingly appreciated the fruit of Western progress and was willing to adopt it. Maréchal Lyautey understood this very well when he took the helm of the Protectorate administration; during his 13-year tenure he successfully enlisted these traditional poles of power in his project and made sure they did not feel threatened by the fast modernization of the country. Thanks to Lyautey’s genius, the pacification of Morocco caused substantially less bloodshed than in neighboring Algeria. This is not an assertion that the French Protectorate was without flaws; injustices were committed and mistakes were made. Nevertheless it is difficult to deny that the Protectorate was a *sin qua non* for Morocco’s modernization.

Conducting research on Morocco's precolonial economic history has been a strenuous task, mostly due to the lack of reliable data on prices, wages, rents, taxes, agricultural yields and populations. The accounts of European travelers and Moroccan chroniclers can provide precious information about the everyday life of Moroccans but it is difficult to differentiate between the fact, the exaggeration, the fabrication, and the mere imagination. It is thus imperative to conduct an extensive survey of all the travel accounts on precolonial Morocco as well as official documents from the royal archives to gather a statistical database of the country’s economic history capable of revealing the scale and scope of economic interactions between individuals and communities and how these interactions changed across time.



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Notes

Chapter 1:

¹ The most common soils in Morocco are: the dark clayey *tirs* (vertisol), the red *hamri* (terra rosa), the alluvial *dehss*, the stony *harch*, the calcareous *biad*, and the sandy *rmel*. To this day, *tirs* and *hamri* soils are highly prized in Morocco as they retain moisture and produce relatively high cereal yields.

² Just an example of the irregularity of rainfall in Morocco, Casablanca receives an annual average of 400 mm but in 1981 it only received 128 mm while a whopping 938 mm of rain fell in 1996.

³ For example, the pre-Saharan Ziz River flooded in 1965 destroying 25,000 homes, 75,000 olive trees and 16,000 date palms in the Tafilelt.

⁴ In the mid-19th century Léon Godard (1860, p. 175) wrote that 'Morocco is largely endowed with forests in the mountainous regions, and there are large forests even in the plains. It seems more forested, more lush and better watered than Algeria'.

⁵ According to a number of Moroccan and European chroniclers, towns were also threatened by wild predators. In Larache for example, Jacob di Hemso (1834, p. 46) wrote that 'lions and panthers sometimes descend from the Beni-Aros mountains to the city walls'.

Chapter 2:

¹ The word Makhzen literally means "warehouse" from where the sultan's civil servants received their wages, but this usage of the word became in Moroccan Arabic a nebulous term connoting the central organization of government. Today, the Makhzen refers to the "deep state" which persists outside the scrutiny of the people although it controls the country's vital economic sectors (mining, fisheries, tourism...).

² Later that year, Spain was given control over the northern part of the country, and the enclave of Ifni on the southern Atlantic coast, as well as the desert south of Draa River.

Chapter 4:

¹ For more on the criticism to Boserup's theory refer to the work of David Grigg (1979).

² In sub-Saharan Africa, the tsetse fly was a limiting factor in the spread of large domestic animals that could be used for transportation and plowing.

³ Clause 39 of the Magna Carta states that 'No free man shall be seized or imprisoned, or stripped of his rights or possessions [...] except by the lawful judgement of his equals or by the law of the land'. However, the term 'free men' designated barons and did not include serfs.

⁴ Another consequence of the voyages of discovery is the introduction of crops from the New World. Potatoes in particular helped Europe overcome the cycles of famine and experience a sustained demographic expansion.

⁵ Not to mention its role in subduing native populations in America, Africa and Asia, as well as protecting Central Europe from the Ottoman threat.

⁶ For more on the development of agriculture during the golden age of Islamic civilization see the work of Andrew Watson (1974).

⁷ For more on the Islamic institutional innovation and their contribution to the growth of trade during the Islamic Golden Age refer to the valuable work of Janet Abu-Lughod (1989, pp. 216-224).

⁸ Tax farming was the dominant form of collecting taxes in pre-industrial societies. It consists of transferring the right of collection from the state to private individuals, called tax farmers, in exchange for a certain fee, usually paid in advance. In some instances, tax farmers accumulated great wealth since the taxes and charges they collected substantially exceeded the amount paid to the treasury.

⁹ Classical economists such as Adam Smith and John Stuart Mill recognized that cultural constraints could have a stronger impact on individuals than the pursuit of personal financial gain, but they never developed a systematic theory linking culture to economic prosperity as did Max Weber.

Chapter 5:

¹ What is a “peasant”? According to Raymond Firth, the term has an economic connotation as it refers to ‘small-scale producers, with a simple technology and equipment, often relying primarily for their subsistence on what they themselves produce’ (Firth, 1967, p. 87).

² For more on plows in Morocco see the work of Jeanne Chiche (2000).

³ In the Chaouia, yields averaged 15 to 1 for barley and 10 to 1 for wheat but could reach 15 to 1 (25 qx/ha) in the dark soils of Mdakra (M.S.M., 1915, vol. 2 p. 66 & 143).

⁴ Surprisingly, wheat yields in mid-19th century Spain did not fare better than precolonial Morocco. Estimates range from 2 qx/ha in the southeast to over 9 qx/ha in the northwest with an average of around 5 qx/ha (Santiago-Caballero, 2012).

⁵ A typical peasant could not cultivate more than 12 hectares even when using a yoke of two horses, 10 hectares with two oxens, and 8 hectares with two donkeys (M.S.M., 1915, vol. 2 p. 105).

⁶ Contrary to the Atlantic Plains, peasants in the pre-Saharan valleys were familiar with forage plants; they had to allocate scarce irrigated land to grow lucern (*fessa*) to feed their cows and oxen for ‘the fertile and irrigated land is of too great a value to allow of its being used for grazing purposes’ (Harris, 1895, p. 300).

⁷ The redistribution period ranged from 3 to 10 years in rainfed agriculture.

⁸ Le Coz (1961) explained that in precolonial Morocco possessing a well-nourished *zouja* was more important than possessing land. This is reflected in relative prices: two horses fetched a slightly higher price than 10 hectares of cleared land.

⁹ There were qaids on whom the sultan only exercised nominal authority; they controlled strategic passes in the Atlas Mountains which allowed them to collect tolls on the trans-Saharan caravans and be immune from the sultan’s army. Prominent among these qaids are Mtougui, Goundafi and Glaoui (Célérier, 1927). But these men could only extend their influence over marginal parts of the country.

¹⁰ Granaries in precolonial Morocco varied from one region to another. But as a general rule, peasants in the Atlantic Plains used individual underground granaries while in the mountains the Berbers held their grains collectively in built silos called *irherm* or *agadir* (Meunié, 1944).

¹¹ Figures are drawn from the works of Rohlf's (1874), Godard (1860), and Hodgkin (1866). For Ajdir, Mouliéras who visited the Rif between the years 1872 and 1893 reported that it contained 1,000 homes (1895, p. 94).

¹² The minting of coins was traditionally assigned to Jewish silversmiths in Fez, Tetuan and Marrakesh. Jews were also renowned for their ability to speak European languages, especially Spanish, and were employed as interpreters to the Sultan when European diplomats visited the country.

¹³ Information on daily wages are from Joly's "L'Industrie à Tetouan".

¹⁴ Urban wages in the early 20th century had not changed much compared to 1876 when Arthur Leared reported the daily wage of an unskilled laborer in Tangier to be no more than 9 pennies (1.5 dirham) while skilled labor earned 2 to 3 shillings (4 to 6 dirhams).

¹⁵ For more on crafts in Tetuan see the excellent work of Alexandre Joly (1906-1912).

¹⁶ Tetuani Jews were the direct descendants of refugees evicted from Spain starting in 1492. They passed on their crafts skills generation after generation and even held on to the language their ancestors spoke in the Iberian Peninsula: Haketia.

¹⁷ Population estimates of the early 20th century are from the work of Cousin and Saurin (1905).

¹⁸ For a detailed history of cotton cultivation in Morocco refer to Miège (1959).

¹⁹ Unfortunately the *shabel* is now extinct in Morocco due to the extensive damming of rivers as well as pollution.

²⁰ During the Portuguese occupation in the 16th century, Azzemour paid a tribute to the king of Portugal in salted *shabel* (del Mármol, 1573/1667, vol. 1 p. 18).

²¹ As part of the Roman Empire, northern Morocco had a network of roads linking its major urban settlements. But these were left to decay so that by 'the advent of the French, not a single kilometer of road existed in Morocco' (Petit, 1920, p. 57).

²² A. Rey witnessed in 1844 how the Za'er tribe attacked a caravan he was part of, and pillaged 400 of its members in broad daylight (Rey, 1844, pp. 48-57).

²³ Arch bridges were typical in precolonial Morocco, and represented no architectural innovation to Roman bridges. In all of Morocco, there were only 5 bridges with multiple arches. The first and oldest was on the Tensift north of Marrakesh; there was a more imposing bridge on the Sebou west of Fez and another bridge in Kasbat Tadla, both built by Alawi sultans. The remains of a bridge on the Oum er-Rbia in Boula'ouan was still standing in the early 20th century (See figure 19), as well as those of a bridge on the Ouergha.

²⁴ A British traveler who visited the Rabat dockyard in the early 20th century was particularly impressed by the skills of its carpenters who 'construct excellent lighters that can stand almost any amount of surf' (Mackenzie, 1911, p. 25).

²⁵ For a more detailed description of public auctions (*dellala*) in precolonial Morocco refer to the work of Jacques Berque and G.H. Bousquet (1940).

²⁶ The rise of Tripoli as an important northern terminus of trans-Saharan caravans came through the efforts of Yusuf Pasha Qaramanli who subdued Bedouin tribes in the Fezzan which guaranteed the safe passage of caravans.

²⁷ Describing sultan Mohammed III as “trade friendly” may be an exaggeration. The sultan engaged in free trade only when its proceeds returned to him. He closed all the southern ports so he could monopolize trade in the newly established port of Essaouira:

The Emperor, pretending to give it new animation, became a merchant himself, and this did but increase the evil, for it did but increase restraint. Obligated to sell their wares and to purchase the country products at such prices as the despot pleased to fix, merchants became merely factors, and were constrained to remove from port to port in his empire, wherever he chose to indicate, as best suited his convenience, or to those to which he gave the preference (Chenier, 1788, p. 298).

²⁸ Sultan Sliman went as far as decreeing the death penalty on those who dared to travel to Christian land without his permission (Miège, 1962/1996, vol. 2 p. 28).

²⁹ Meir Macnin’s status was so uncontested in the port towns that he publicly rode his horse at a time when his coreligionists were forbidden from doing so (Schroeter, 2002).

³⁰ To appease the ‘ulama, sultan Abderrahman requested 2 pounds of gunpowder, in addition to the export duty, for every quintal of wool exported (Rey, 1840, p. 644).

³¹ This was also true in previous centuries. In his *nashr al-mathani*, the Moroccan chronicler al-Qadiri (al-Qadiri, 1772/1986) alternate between several currencies (mithqal, uqia, dirham, mouzouna) and several weight measures (wasq, mudd, sa’) when reporting the price of wheat and other food commodities to the point of confusion.

³² Budget Meakin reported that the peasants near Sefrou bartered their plums for barley (Meakin, 1901, p. 342).

³³ Many European travelers referred to the silver *mithqal* as ducat or thaller, which also weighted around 28 grams of silver.

³⁴ For more on European currencies in the 19th century refer to the work of Markus A. Denzel (Denzel, 2010).

³⁵ The crown contained 26 grams of fine silver and was equivalent to 5 shillings, each made of 12 pence (sing. penny). Four crowns made one pound, which came in the form of a paper bill, called a note, or a gold coin called a sovereign.

³⁶ Morocco first experience with machine-made coins dates back to 1772 during the reign of sultan Mohammed III when he commissioned 10,000 gold coins from Spain. The sultan died however before their arrival and it is not clear why his successor chose not to circulate them.

³⁷ Moses Pariente, a Jewish merchant from Tangiers, established the first Moroccan bank in 1804. By 1860 other banks were established in Tangiers by Jews of Moroccan descent: Moses Isaac Nahon, Salvador Hassan, and Haim Benchimol.

³⁸ David Urquhart (1850, p. 304) provides in his travel account the amounts of *jizya* collected in each of the country’s major towns; but he does not clarify the source of this information.

³⁹ See for example the works of Serafin Calderon (1844) and Camille Fidel (1903).

⁴⁰ This section relies heavily on the work of J.L. Miège (1962/1996, vol. 4 pp. 333-347).

Chapter 6:

¹ The Moroccan diplomat Mohammed Bensaïd al-Slaoui reports that when he met a French minister in Paris 'he asked us how many people live in Morocco, so we replied that there are many but we do not know exactly their number' (Biad, 2015).

² Angus Maddison (2010) provided rough estimates of Morocco's precolonial population in the year 1, 1000, 1500, 1600, 1700, 1820 and 1870. But these lack credibility and are too spaced that they fail to capture the country's demographic fluctuations over the period. For example, his estimation of one million for year 1 seems to only include the area under Roman domination, namely Mauretania Tingitana. For year 1000, his estimate of 2 million goes against the descriptions provided by Arab geographers such as Ibn Hawqal and al-Bakri. Finally, Maddison suggested that Morocco's population increased from 3.77 million to 5.11 between 1870 and 1913 despite the catastrophic 1878-1882 episode of famine and epidemics which decimated one third of the population.

³ For example the German geographer Gustav Adolf von Klöden thought Morocco's population was less than 3 millions (Klöden, 1869, p. 694).

⁴ For example, James Grey Jackson (1810, pp. 82-84) came up with the following numbers:

Cities and towns	895,600
Atlantic Plains and Souss	10,341,000
The mountainous regions	3,000,000
The pre-Saharan oasis	650,000
Total	14,886,600

⁵ The agricultural potential of Morocco, although important, was sometimes exaggerated by some European travelers. In the 18th century, Georg Host (1779/2002, p. 90) claimed that 'given the extent, wealth and fertility of the country, it should have twenty times more inhabitants'. The British explorer James Richardson wrote impressively:

Whoever travels through Morocco, and will but open his eyes to survey its rich valleys and fertile plains, will be impressed with the conviction that this country, cultivated by an industrious population, and fostered by a paternal government, is capable of producing all the agricultural wealth of the north and the south of Europe, as well as the Tropics, and of maintaining its inhabitants in happiness and plenty (Richardson, 1860, vol. 1 p. 174).

⁶ The first attempt to measure population densities across Morocco was undertaken by Jean Dresch in 1933. His *Carte de Densité de la Population* reveals an uneven distribution within the Atlantic Plains with the Doukkala, 'Abda, and the pre-Rif plains boasting population densities of over 40 hab/km² (Dresch, 1934).

⁷ In pre-industrial England, the hectare of land was worth at least the wage of 200 days (Galenson, 1989, p. 89).

⁸ Of his original name Hassan al-Wazzan, Leo Africanus was born in Granada at the time of its fall to the Catholic Monarchs in 1492. Consequently, his family migrated to Fez where he completed his studies in the al-Qarawiyin and worked for the sultan in several diplomatic missions. He was captured by Christian pirates on his journey back from pilgrimage. Realizing his intellect and scholarship, his captors offered him to Pope Leo X. He was subsequently baptized and given his Christian name. His "Description of Africa", completed in 1526, is the most reliable reference on sixteenth-century Morocco and the Maghreb.

⁹ Ester Boserup suggested that agricultural change is related to population pressure and that changes in demographic density should be reflected by a transition in land use strategies. Her argument is based on the idea of diminishing marginal productivity of labor: without the inducement of resource scarcity, people do not intensify due to the increase in work and the mediocre returns on labor. Using examples of traditional agricultural systems, she advanced the relationship between population density and agricultural intensification; she identified 5 agricultural systems and provided a range of population densities they could support:

System	Description	hab./km²
1. Gathering Pastoralism	Wild plants, roots, fruits and nuts Possibly domestic animals	0 to 4
2. Forest - fallow	1 or 2 crops followed by 15-25 years fallow	0 to 4
3. Bush-fallow	2 or more crops followed by 8-10 years fallow	4 to 16
4. Short-fallow	1-2 crops followed by 1-2 years fallow	16 to 64
5. Annual cropping	1 crop each year with few months fallow	64 to 256
6. Multi-cropping	2 or more crops in same fields with no fallow	> 256

¹⁰ Peter Von Sivers (1980) makes the extraordinary claim that the Banu Hilal and Banu Sulaim tribes 'contributed to demographic boost of the North African population and therefore their arrival resulted in intensified, not diminished agriculture'.

¹¹ After describing Oulad Hariz as the only fully settled Chaouia tribe, Frédéric Weisgerber wrote that everywhere else in the Chaouia 'livestock is the main occupation of the Bedouin and certain peripheral tribal factions engaged in it almost exclusively' even though their soil is as fertile as that of the Oulad Hariz (Weisgerber, 1935, p. 7).

¹² In precolonial Algeria, the Mitidja plain near the capital was also prone to swamps and French colonial soldiers stationed there suffered from Malaria. Once the swamps were drained, the Mitidja became the most agriculturally productive region in Algeria (Côte, 2012).

¹³ This is assuming that the marginal productivity of labor for cereal farming is initially greater than that of livestock raising; otherwise the peasant would turn exclusively to the latter and become a nomadic pastoralist as was the case in the arid highland in the east of the country.

¹⁴ Jan de Vries (1972) (2008), and Deepak Lal (2001, p. 179) provide a detailed graphical representation of Boserup's argument.

¹⁵ Beer production in Europe expanded starting in the 11th century after the introduction of hops in the brewing process which made the beverage tastier and more appealing to regular consumption; this 'no doubt created local demand for brewing grains near the centres of manufacture' (Dyer, 1997, p. 304).

¹⁶ Georges Colin (1945) wrote an interesting article on the navigability of the Sebou River in the early Islamic period.

¹⁷ The economic occupation of Jews in rural Morocco was not restricted to petty peddling. Jews were also reputed tinkers, shoemakers and cobblers who sold their service in the weekly markets. In the river valleys of the Atlas Mountains, Jews were often under the protection of a *sharif* or tribal leader, to whom they supplied handicrafts and performed commercial transactions (Pascon, 1980).

¹⁸ Polanyi argued that there were 3 forms of exchange: reciprocity, redistribution, and markets. Only in market economies, Polanyi suggested, did individuals interact as “disembedded” social actors interested only in gain. In pre-market systems, economics was embedded in other social institutions in order to promote the orderly production and distribution of goods and to induce individuals to participate in the economic system (Polanyi, 1944, p. 57).

¹⁹ The most common form of reciprocity was *twiza*: When community members undertake work for one of the members or for the whole *douar*. There was also the *ouzi'a* where a group of peasants share the ownership of a cow and rotate its grazing on their land.

²⁰ The social anthropologist Clifford Geertz (1978) described market relations in the town of Sefrou as a “Bazaar economy” where persistent information asymmetry led to the emergence of client type relations between buyers and sellers. Once a relationship got started, buyers preferred to negotiate over the price with the same seller instead of looking for a different seller who might be offering a better price.

²¹ Ester Boserup makes the exception that a high degree of urbanization could be achieved in a sparsely populated area if transportation costs are minimized by a river transport system as was the case in ancient Egypt and Mesopotamia.

²² Historical data on city populations are from Tertius Chandler's “Four Thousand Years of Urban Growth” (1987).

²³ One way urban merchants in the Late Middle Ages imposed their commercial interests is by organizing into politically powerful guilds which helped them curb the power of crafts guilds. In Morocco, all guilds were subjugated by the sultan who occasionally preyed on merchants and artisans alike if their wealth became too obvious (Stambouli & Zghal, 1976).

²⁴ One interesting question is how wages in the urban craft sector reacted to demographic crisis. Did they increase as a consequence of labor scarcity as suggests El Mansour (1990, p. 40), or did they falter due to the collapse of demand for their products as explained by Nicolas Michel (1997, p. 519)?

²⁵ For more on watermills in Fez see the article by Tariq Madani (2008). For Tetuan, check the fourth part of the study on industry there by Alexandre Joly (1906-1912). In his study on watermills, Robert Cresswell (2002, p. 183) describes those of the Atlas Mountains.

²⁶ John Drummond-Hay wrote the following about his experience eating locust:

[...] the female locusts, when full of eggs, become an article of food with the Moors. They are boiled in salt water in the same manner as shrimps, which they resemble in taste, but it requires some resolution at first to get the monster into your mouth (Drummond-Hay, 1844, p. 37).

²⁷ This question divides geographers and historians. Jean Poncet (1961) considers that there has been no significant change in the climate in historical times, although he recognizes that the advancing desert is undeniable. In contrast, Robert Vernet (1976) notes certain signs that confirm that climate has become dryer compared to ancient times but without being able to provide a precise date for the phenomenon.

²⁸ For a list of calamities affecting the Maghreb in the 11th and first half of the 12th century refer to the work of Allaoua Amara (2003, p. 9).

Chapter 7:

¹ Under the Togukawa system, each daimyo was sovereign in his respective fief (*han*) possessing the right to levy taxes and ban his subjects from leaving. Moreover, daimyo established local monopolies and levied custom duties on imports into their *han*.

² Religious education in precolonial Morocco was the path to a career in the Makhzen (Rassam & Miller, 1983).

³ There were 129 'ulama at the turn of the 20th century according to the Moroccan historian Ibn Zaydane (1929).

⁴ Budgett Meakin (1906, p. 219) reports an interesting conversation between a Greek minister Kyrios Mavrogordato and the sultan through a Jewish interpreter. It is impossible however to verify its authenticity.

Minister: His Majesty is exceedingly gracious, and I am correspondingly obliged to him. Inform His Majesty that the same firm is willing to build him bridges over his rivers, and to make roads between the provinces, which would increase friendly communications, and consequently tend to reduce inter-tribal feuds.

Interpreter: The Minister thanks our Lord, and wants also to build bridges and roads in the interior to make the tribes friendly by intercourse.

Sultan: That would never do. The more I keep the tribes apart the better for me. If I did not shake up my rats in the sack pretty often, they would gnaw their way out. Besides, where my people could travel more easily, so could foreign invaders. No, I cannot think of such a thing. God created the world without bridges.

⁵ Although the Quran accepts Jesus of Nazareth as a Prophet in the monotheist tradition, it claims that his message had been distorted by subsequent followers.

⁶ Moroccan diplomats were not only perplexed by Europe's technological superiority, but also by the kindness and manners of Europeans. For example, Taher al-Fassi wrote about his impression of the captain of the ship he boarded:

This captain, despite his disbelief, we were amazed at his kindness, good character and manners, his help for us and gentleness, we wished he was a Muslim (al-Fassi, 1860/1967, p. 5).

⁷ In his "*Muqadima*", Ibn Khaldun argued that nomadic tribes possess a strong sense of solidarity, '*assabiya*', combined with a warrior spirit which helps them emerge in the periphery of great empires to topple the existing leadership. This was the case of the great Berber dynasties that governed Morocco: the Almoravids, the Almohads and the Merinids. However, once established at the helm of their empire, they become increasingly lax and their '*assabiya*' gradually dissolves into factionalism and individualism, diminishing their capacity as a political unit. Thereby creating opportunity for other nomadic group with '*assabiya*' to emerge.

⁸ The Moroccan historian al-Jabiri (1994, p. 168) defines '*assabiya*' as 'a social-psychological bond, conscious and unconscious at once, linking the members of a community, based on blood relations, its constant bonding intensifies and becomes more prominent when a danger threatens these individuals as individuals and as a community'.

⁹ The widespread illiteracy among the rural populace and the prevalence of oral over written tradition makes it impossible to trace the composition and origin of most tribal groups.

¹⁰ There are of course exceptions where women had a say over tribal decision making. Stutfield reported that 'the independent Berbers seem to possess a less patriarchal system of government than the Arabs' where 'women occupy a higher social position' (Stutfield, 1886, p. 120). In the southern Rif, Mouliéras observed that the Berber 'accords to his wife a great freedom' and that women are free to go out 'with their face uncovered and even attend the deliberations of the tribal council where they often speak, without letting go of their inseparable rifles, which they use very skillfully' (Mouliéras, 1895, p. 119).

¹¹ Of course there were other requirements for the choice of a market site, chief among them is the availability of water and a suitable topography.

¹² For an explanation of the difference between the two finance systems refer to the work of D'Altroy and Earle (1985).

Chapter 8:

¹ The Moors being the Arabic-speaking inhabitants of the Atlantic Plains who engaged in a combination of rainfed farming and livestock raising.

² For more on the economic and political ascendancy of the Swassa, refer to the work of Waterbury (1972).

³ 'A Fas merchant (with whom I had considerable transactions) went, with all his property, on a commercial speculation from Fas to Timbuctoo; and after remaining at the latter place a sufficient time to dispose of and barter his effects for gold dust and gum of Soudan, he set out on his return to Fas; after passing the Desert, he began to congratulate himself on his good fortune and great success, when suddenly a party of Arabs attacked the (cafila) caravan, and plundered all who belonged to it, leaving the Fas merchant destitute of every thing but what clothes he had on his back. (...) this man was plundered again on his way to Mogodor, whither he was going to discharge some debts and to dispose of gum and other Soudanic produce. Four wives and a numerous family of children rendered his case peculiarly distressing; yet, when condoling with him a few days after his misfortunes had happened, he very patiently observed (Ash men doua, Allah bra; u la illah, ila Allah), What remedy is there? God willed it so, and there is none but God. This man afterwards collected together what merchandize he could procure on credit, and proceeded again to Timbuctoo, where he realized much property, and traveling therewith through Wangara and Houssa to Egypt, he was plundered a third time of all he possessed, near Cairo, and reduced to the greatest distress: this last misfortune he bore with the same fortitude as the former. He is now, however, one of the principal merchants established at Timbuctoo'.

⁴ Even European dress code was frowned upon by Moroccans and some 'ulama went as far as declaring those who adopt it as apostates.

⁵ This was also true in the 17th and 18th centuries when thousands of Europeans were captured by Moroccan Corsairs. Many chose to convert to Islam in order to escape enslavement and the harsh conditions European slaves were subjected to. This was the case of Thomas Pellow, a captured English sailor who spent 23 years in Morocco before managing to return to his native Cornwall.

⁶ Mohammed al-Manouni (1985, vol. 1, pp. 166-190) provides a detailed description of the educational missions to Europe during sultan Hassan.



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