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UNITED STATES OF AMERICA

Morocco's Growth Diagnostic

Identifying Morocco's Binding Constraints to Broad-Based Growth



The original version of the report is in French

Morocco's Growth Diagnostic

Identifying Morocco's
Binding Constraints to Broad-Based Growth



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List of Acronyms

AfDB	African Development Bank
AMDI	Moroccan Investment Development Agency
ANPME	National SME Promotion Agency
ANRT	National Telecommunications Regulatory Agency
ATM	Asynchronous Transfer Mode
BPW	Building and Public Works
CDG	Deposit and Management Fund
CDS	Credit Default Swap
CERED	Centre for Demographic Studies and Research
CGEM	General Confederation of Moroccan Enterprises
CILCC	Inter-ministerial Anti-Corruption Commission
CMI	Moroccan Innovation Centre
CNEF	National Education and Training Charter
CNSS	National Social Security Fund
CPC	Civil Procedure Code
CT	Corporate tax
DCFTA	Deep and Comprehensive Free Trade Agreement
DCT	Domestic Consumption Tax
DEPF	Directorate of Studies and Financial Forecasts
MAD	Moroccan Dirham
DWS	Drinking Water Supply
EBA	External Balance Assessment
EFTA	European Free Trade Association
SUT	Supply and Use Tables
EU	European Union
IDF	Industrial Development Fund
FDI	Foreign Direct Investments
GAFTA	Greater Arab Free Trade Area
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
HCP	High Commission for Planning
UMIC	Upper Middle-Income Country
HST	High-Speed Train
ICT	Information and Communication Technologies
IMF	International Monetary Fund
IT	Income Tax
LMIC	Lower Middle-Income Country

MCC	Millennium Challenge Corporation
MEDA	SME Modernization Programme
MENA	Middle East and North Africa
MMEI	Metallurgical, Mechanical and Electromechanical Industries
MRA	Moroccans Residing Abroad
MSCI	Morgan Stanley Capital International Index
NTM	Non-Tariff Measures
OCF	Moroccan Phosphates Authority (Office Chérifien des Phosphates)
OECD	Organization for Economic Cooperation and Development
OHI	Obligatory Health Insurance
ONEE	National Electricity and Drinking Water Authority (Office National de l'Électricité et de l'Eau Potable)
PEI	Public Enterprises and Institutions
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PMN	Upgrading Programme
PNA	National Liquid Sanitation and Wastewater Treatment Programme
PNAZI	National Industrial Zone Development Programme
PNEI	National Pact for Industrial Emergence
PPP	Public Private Partnership
PRESIMO	Macroeconomic Forecast and Simulation Model (Modèle macro-économique de Prévision et simulation modèle)
RAMED	Medical Assistance Scheme
SMAEX	Moroccan Export Insurance Company (Société Marocaine d'Assurance à l'Exportation)
SME	Small and Medium-sized Enterprises
TFP	Total Factor Productivity
TIMMS	Trends in International Mathematics and Science Study
TOE	Tonnes-Oil-Equivalent
AME	Arab Maghreb Union
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
USA	United States of America
VAT	Value Added Tax
VSE	Very Small Enterprise
WAEMU	West African Economic and Monetary Union
WDI	World Development Indicators
WTO	World Trade Organization
TFZ	Tangier Free Zone

Preface

This work is the result of the joint commitment of the Government of the Kingdom of Morocco, the African Development Bank (AfDB) and the Millennium Challenge Corporation (MCC).

The Government expressed the wish to have an objective diagnostic analysis of economic growth focused on the main constraints preventing it from being as strong, sustainable and inclusive as desired, with a view to adjusting its economic policies accordingly and introducing the necessary reforms aimed at removing or, at least, alleviating these constraints.

The AfDB, one of Morocco's leading donors, responded to the Government's request by conducting this diagnostic prior to the launching of preparatory works for the second program of cooperation with the MCC (Compact II). This will consolidate its financial commitment to Morocco through a high quality scientific contribution which will also help to inform the direction of its own operations in the country as well as those of other donors by identifying the areas in which it would be most appropriate and most opportune to intervene.

The MCC, which advocates poverty reduction through economic growth, has learnt lessons from the first generation of assistance programs (Compact) that it financed in Morocco and other countries. In the Second Compact for which Morocco is eligible, it intends to act, in partnership with the Government, based on a comprehensive analysis of the major constraints to growth, where its intervention could have the most significant positive spin-off benefits for growth and the reduction of poverty and inequalities.

In light of the foregoing, the three partners collaborated in the preparation of the growth diagnostic for Morocco by using a recognized empirical method, the HRV, from its authors Hausmann, Rodrik and Velasco of Harvard University. This methodology makes a systemic analysis of production factors and business climate conditions to identify the key obstacles to private investment and growth. This approach results in the identification of the main existing constraints, which should first be tackled in order to boost investment and growth.

It should be indicated that, in addition to applying the above-mentioned method, broad-based consultations were conducted with the Ministerial Departments and public institutions concerned, the private sector, academia and civil society.

While taking part actively in the consultations and providing the team responsible for drafting the report with the required data, the Government, with its two partners, wanted the report to be drafted with maximum objectivity and scientific rigor.

This report, even before its publication, achieved one of the first objectives, namely determining the potential sectors in which MCC support could be focused under Compact II. However, much more is still expected from it, namely serving as a platform for broad-based discussion on the report's different themes. All stakeholders (universities, private sector, public sector, civil society, mass media, etc.) should assimilate the contents of this work, criticize it, enrich it and make proposals that can help to fulfill the conditions for strong, sustainable and inclusive growth, that is, at the service of all social classes and categories from all the regions of the country, especially the least privileged ones.

Consultative Process

Broad-based consultations: a participatory process which enriched the analysis of constraints to growth and confirmed its conclusions

The study of constraints to growth in Morocco is the result of a detailed analysis conducted according to the HRV growth diagnostic approach, complemented by a process of broad-based consultations with the parties concerned at the central, regional and local levels. This approach sought to ensure, from the parties consulted, that the issues likely to be an obstacle to growth were duly taken into account, provide useful clarifications on various points of view in the analysis and encourage dynamic interaction with the team in charge of the study throughout its preparation so that the relevant conclusions could be widely shared, as the best way of ultimately guaranteeing their collective ownership.

Consequently, immediately after setting up the team responsible for working on the report, several workshops were organized in Rabat from 18 to 22 September 2013. These workshops laid the groundwork by immediately raising relevant issues that could help to identify the constraints to growth in particular, in the areas of infrastructure, investment financing, human capital and micro and macroeconomic distortions, etc. These workshops were facilitated by representatives from the Ministries concerned, certain important public institutions and establishments, the private sector and academia as well as representatives of the Presidency of the Government, the MCC and the AfDB.

This stage also provided an opportunity to identify and mobilize information sources that would make available all the necessary documents and data to the report preparation team. It enabled the team to conduct in-depth empirical investigation work that, starting from November, resulted in the report's first conclusions identifying major constraints to economic growth in Morocco.

It was, therefore, necessary to organize a second consultation in order to subject these conclusions to a critical examination by experts and high-ranking officials representing the administration and relevant public and private institutions as well as renowned academics. This was done on 13 and 14 November 2013. The high-level debates that took place on this occasion helped to enrich the reflection on the various constraints to growth by presenting

tangible facts drawn from the experience of participants, qualifying certain conclusions and helping the team to incorporate data that had not been adequately taken into account, in order to reflect reality and then make better justified conclusions.

Thus, the November consultations helped the team to gather considerable information and guidelines to be able to complete the work, which contributed to facilitating the finalization of the first draft of the report towards early January 2014.

A new phase of consultations then began from 20 to 29 January 2014, and was expanded to include other key stakeholders such as civil society organizations, employers' organizations, certain decentralized public institutions, technical and financial partners and resource persons known for their expertise in the various areas covered by the report. The goal was to compare the findings of the study conducted with the points of view expressed by the different interlocutors at the national, regional and local levels in order to validate, reject or qualify them.

Despite the local and sector differences expressed during these consultations that laid emphasis, at times, on certain difficulties that are specific to a particular region or sector, it was observed that the report's conclusions were widely confirmed by most interlocutors, who even reinforced them by mentioning concrete examples of obstacles affecting investment and, therefore, growth.

Furthermore, alongside the analysis of constraints to growth, a study was conducted on social and gender constraints in Morocco and gave rise to a seminar held in Rabat on 20 and 21 January 2014. This event provided an opportunity as it brought together various stakeholders, including, in particular, the Ministries concerned and civil society organizations to discuss various themes related to this specific report. Since there are close links between social and gender issues and the various factors determining the trend of economic growth such as human capital, justice and infrastructure. Consultations on the above-mentioned report also contributed, to a large extent, to enhancing and enriching the analysis of the constraints to growth.

Even though the report on the analysis of constraints does not claim to reflect all the richness and diversity of the discussions that arose from these broad-based consultations, it may be stated that the essence of the ideas expressed is reflected in the contents of this document.

It is also worth pointing out that the interactive process of consultations between the AfDB, MCC and Presidency of the Government teams and, through the latter, the various Moroccan Ministries concerned, continued even after the submission of the pre-final draft of the report, reviewed in light of the above-mentioned consultations. This stage was useful in providing the final clarifications and details required to finalize the document based on reliable data and meeting the requirements of rigorous analysis.

The consultative process had two essential outcomes: first, it helped to ensure that the analysis of constraints to growth was not a simple intellectual exercise carried out in a vacuum by experts, but rather it is a transparent interactive process between the team responsible for the work and economic and social actors and the institutions responsible for regular monitoring of economic activity in the country, making it possible to validate and give more weight to the results of the analysis; second, these consultations fostered real ownership of the study and its results by all participants, including the public administration. This ownership will certainly have a positive effect on the design and implementation of the subsequent policies and measures aimed at removing, or at least alleviating the main constraints to growth.

A non-exhaustive list of organizations consulted is attached in annex (Annex 1.1) in order to provide a more accurate idea of the extent of the consultations held throughout the report's preparation.

Executive Summary

Introduction

Over the last decade, Morocco embarked on an important reform process in order to ensure an in-depth transformation of its economic and social model. Taking into account the challenges to be addressed, these reforms successfully tackled macro-economic stability, institutional efficiency, international integration of the economy, industrial development, youth and women's employment, social cohesion and poverty reduction.

These reforms helped to generate sustained growth rates (5% on average over the last ten years). During the first decade of 2000, Morocco's economic growth volatility decreased, indicating a convergence of macroeconomic dynamics towards sustainable growth paths. This period was marked by a substantial reduction in public debt and a low inflation rate (1.9% in 2013). Thus, the slow growth observed in the 1990s was largely offset.

This growth has contributed to a significant drop in absolute poverty and unemployment in Morocco. Thus, the poverty rate fell from 15.3% in 2001 to 9% in 2007. The unemployment rate dropped from 13.4% in 2000 to 9% in 2013. There was a marked

improvement in access to educational services, health services, drinking water and rural roads, contributing to the improvement of human capital and the population's living standards.

This progress was made in a context of economic openness in Morocco. The country signed agreements with the EU in 2000 and the USA and Turkey in 2006 and with many countries of the sub-region (AMU, Agadir Agreements, GAFTA). Morocco became the only country in the region to have signed an advanced status agreement with the European Union and actively forged closer economic ties with Sub-Saharan Africa. Nevertheless, foreign trade remains a weak point of the Moroccan economy. Exports are geographically concentrated and show a lower than-expected growth. Due to commodity price trends, the growth in energy imports since 2009 and resumption of food imports since 2007 negatively impact on the trade balance.

One of the paradoxes of the Moroccan economic model is the fact that, although the country has one of the highest investment rates in the world (31.7% of GDP in 2012), the growth rate remains below expectations and is driven by private and public consumption. In the last ten

years, Morocco has become one of the main destinations of foreign direct investment in the MENA region. Nevertheless, foreign direct investment inflow remains structurally limited compared to those received by comparator countries. This paradox can be explained by the fact that the increase in total factor labor productivity increased at a relatively lower pace and that the investments have been undertaken in sectors known for low value added.

Ensuing from this first paradox, the second paradox is the economy's lack of structural transformation and low industrialization.

Regarding production, the breakdown of value added by sector shifted slightly towards services but has not evolved significantly since the nineteen eighties; agriculture still occupies an important position in wealth creation. Investments are undiversified and are increasingly concentrated in mechanical and electrical industries, as well as in the building and construction sector, which are high importers of intermediate consumption. Value chains are consequently undeveloped and the innovation process has slowed down.

The third paradox is the fact that the private sector is not sufficiently dynamic and lacks small and medium-sized enterprises (“missing middle”), which is the private sector component that tends to show the greatest innovation in other countries. The rest of the economy is made of suboptimal

firms with unproductive activities (often in the informal sector) and characterized by low profits.

Despite the progress made, significant development challenges remain and only stronger private sector-driven growth will be able to address them.

Absolute poverty has dropped sharply, but economic vulnerability is still a concern. Youth unemployment is relatively high and social protection coverage is limited. Access to education has increased remarkably, but the illiteracy rate (39% of the total population aged 10 years and above, 50% of rural people and 65% of rural women) and gender disparities in secondary education are still highly significant. The results in terms of education and learning quality are far behind those of countries with similar income and the mismatch between labor market supply and demand is increasingly significant.

In this regard, this study seeks to define the obstacles hampering private investment in Morocco and blocking its economy's structural transformation, despite the reforms undertaken.

It is based on the assumption that private sector investment and entrepreneurship are, generally, the sources of sustainable and inclusive economic growth.

The methodology adopted in this report has the advantage of clearly identifying the major constraints to private investment

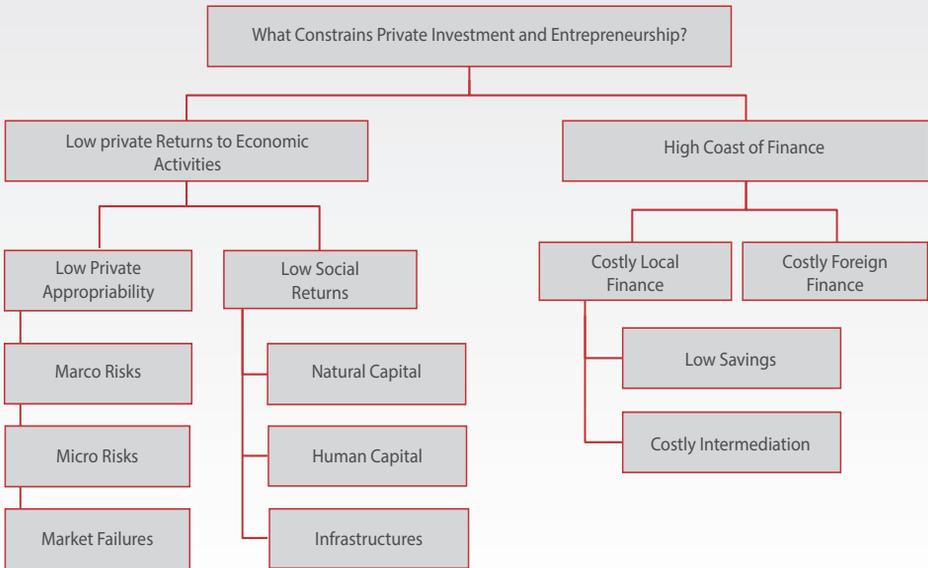
in Morocco and emphasizing the priority obstacles to be overcome within the framework of a more efficient medium and long-term development strategy. The results of this study will be very useful in light of the present context of the Moroccan economy (an economy experiencing major economic and institutional reforms) and will help to define the key reform thrusts that will help to achieve steady and higher growth rates and greater social inclusion.

Methodology

This study is based on the growth diagnostic methodology proposed in 2005 by Ricardo Hausmann, Dani Rodrik and Andrès

Velasco (HRV). This methodology assumes that all countries must face a wide range of economic and development challenges. Reforms and investments are constrained by a) the government's implementation capacities, b) the policy space and c) available financial resources. The most efficient method of boosting growth consists then in the prior alleviation of the difficulties which limit it the most. Since it is impossible to quantify all the direct and indirect effects linked to overcoming a given growth constraint, the fact of surmounting the seemingly most restrictive obstacles could be the simplest way of maximizing the impact of public action on growth.

Growth Diagnostic Tree According to HRV



Source: HRV (2005)

In order to identify the “constraints to growth” which decision-makers must first address, the authors prepared a “diagnostic tree”. The diagnosis is based on two simple and fairly uncontroversial proposals.

First, it is assumed that private investment and entrepreneurship – the process of identifying profitable trade outlets, improvements in productivity and innovation, as well as the use of resources to create value, are the main engines of sustained economic growth. The level and type of investments depend mainly on the prospect

of adequate returns for the investor, in light of the financing risks and costs. To understand the reasons for inadequate growth and private investment, it is, therefore, necessary to analyze the factors affecting returns and the difficulties faced by private entrepreneurs.

The second fundamental aspect taken into account in this empirical method is that poor economic performance – for instance, low levels of investment, consumption, employment or credit can arise from limited supply or demand for a given factor/good/service.

Hausmann, Klinger and Wagner (2008) propose four “tests” to determine the existence of a potential obstacle:

Type 1 Test: Ascertain whether the shadow price of the constraining factor is high¹;

Type 2 Test: Ascertain whether changes in the availability of a constraining factor are correlated with changes in investment or growth;

Type 3 Test: Determine whether economic agents are incurring costs or risks to bypass the constraint;

Type 4 Test: Determine the number of firms that do not rely heavily on the constraining factor. This is known as the “camels and hippos” test, by analogy to the expectation that hippos will rarely be observed in an environment lacking water; rather one expects to see firms that have adapted to existing conditions, like camels in the desert (water being the constraining factor in this case).

The HRV framework calls for a diagnostic approach starting at the top of the tree. Therefore, the first question asked is whether

private investment and entrepreneurship are primarily limited by (i) a high cost of finance arising from financial market constraints accompanied by high investment demand; or by (ii) weak investment demand by potential entrepreneurs, who see few opportunities to earn an adequate return, either because of a) lack of factors of production (human capital, national resources, infrastructure) or b) excessively high macro or micro economic risks. Depending on the answer to this question, the diagnostic study then identifies the source of the problem, i.e. high financing costs or low returns on private investments.

In order to assess whether a factor of production is an impediment often requires comparing the economy with those of other countries. To be informative, the comparison should retain countries which, from an economic standpoint i) were comparable to Morocco in 1960, ii) are comparable to Morocco in 2013 iii) are sources of inspiration. To this end, Tunisia, Chile, Indonesia, Romania, Turkey and Malaysia were chosen as comparators for Morocco. In some cases, aggregate data from higher middle-income or lower middle-income countries were used.

¹ A shadow price is the marginal value for the economy of an additional unit of the factor.

Major Constraints to Growth in Morocco

The application of the growth diagnostic methodology framework (HRV), described in the preceding paragraph, highlighted two major constraints to private sector-driven growth:

- **Human Capital: access to education and quality of the educational system**

Morocco's educational and training system is the weak link in the development of its human capital. Despite the considerable efforts being made by the Moroccan government, secondary and higher education enrolment rates remain low. The average length of schooling is lower than the average of countries with the same income level. This situation results in a labor force with poor general and specific skills, as pointed out by many private sector actors.

These conclusions are drawn from i) low returns to education; ii) Morocco's weak performance in education and training; and iii) poor results of Moroccan students in international tests. Indeed, those who can afford it turn to private education and enrolment rates in private schools are increasingly high (especially in secondary education). This situation negatively impacts the development of sectors dependent on skilled labor, whose value added has declined.

- **Microeconomic Risks: a slow legal system, distortion in the taxation system, difficult land access and constraining labor market regulation**

The analysis leads to the conclusion that microeconomic risks are a major constraint to private investment development in Morocco. Weak ownership of the return on economic activity often arises from the failure of government policies and institutions which creates microeconomic risks and distortions, reduces returns on private investments and slows down economic growth. In the case of Morocco, these microeconomic distortions and weaknesses have become a major constraint to economic growth and impacted private investment. Thus, the sluggish judicial system (especially in the enforcement of court rulings), increasingly difficult access to land, distortions in the taxation system and labor market regulation represent major challenges to be addressed by the Moroccan Authorities.

Morocco's judicial system is constraining and does not facilitate economic activities. Despite the reforms undertaken during the last decade to modernize and strengthen its institutional framework, the system remains sluggish in the implementation of procedures and decisions, which has encouraged Moroccan and foreign firms to avoid using the judicial system. Recognizing the importance of this factor in the development of the country's economic activity, the government is now

undertaking structural reforms to ensure a more efficient and modern legal system that will encourage private investment and build investor confidence.

The analysis also noted that access to agricultural and industrial land is a major constraint to private investment development in Morocco. Access to land (industrial and agricultural) is increasingly difficult, especially because of the complex land tenure system and the diversity of land management regulations. The State's decreasing land reserves have reduced the availability of useful land for investment. In the agricultural sector, the land tenure issue is responsible for the low yields of agricultural plots owing to limited land registration and issues of joint ownership and fragmentation. In the industrial sector, the unavailability of adequate industrial land that meets the needs of firms seems to be the most constraining factor. This is due to land development decisions and the configuration of areas that do not match the actual needs of investors, the inadequate capacity of the land administration, and above all lack of coordination.

The taxation system remains a constraint and it prevents efficient allocation of investments despite the efforts made to simplify and establish a fair, visible and coherent system. Morocco's taxation rates are not excessive and are comparable to those of comparator countries like Tunisia.

However, Moroccan entrepreneurs still consider taxation as a very heavy burden and an obstacle to the development of their activities. Successive changes and reforms have left the system subject to multiple interpretations and it has, therefore, become less transparent. There are ongoing reforms which could have a positive impact on the business environment in Morocco.

Labor regulation and cost appear to be a major constraint to private investment in Morocco. According to international rankings, Morocco is among the countries that have a particularly rigid labor code. Firms are often unwilling to comply, which explains the high number of strikes per year

- **Ensuing Risks and Potential Obstacles**

In addition to the two main obstacles that have just been mentioned, the analysis highlighted the existence of market innovation and coordination weaknesses. The sophistication of Moroccan exports is limited in relation to its level of income per capita, and structural transformation results remain relatively modest compared to those of comparator countries. Government policies aimed at encouraging innovation are generous. However, there is still a lack of coordination between public (agencies and ministries) and private (within value chains) sector actors and between the public and private sectors (e.g. promotion of trade agreements).

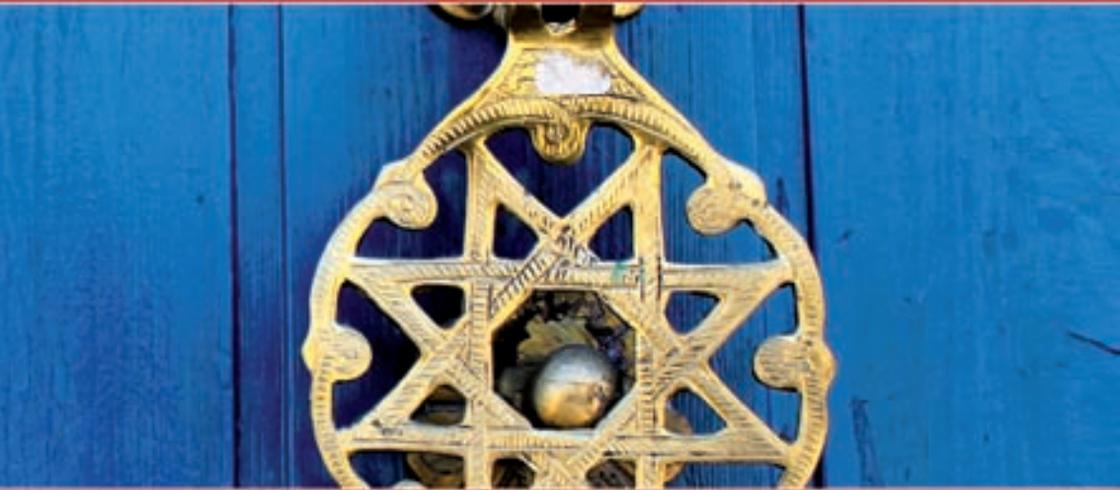
Finally, the analysis also highlighted the need to improve access to various health services and infrastructure in rural and remote areas and to improve the management of scarce resources (water and energy). Indeed,

even though they are not currently constraining, these problems could worsen and must be taken into account during the formulation of a sustainable economic model, from both a social and environmental standpoint.



Chapter 1

Overview of the Moroccan Economy



Chapter 1: Overview of the Moroccan Economy

Key messages

- The economic policies implemented in Morocco since the end of the structural adjustment program have to a certain extent succeeded in achieving macroeconomic stability, institutional efficiency, integration into the international economy, industrial development, employment, social cohesion and poverty reduction.
- During the first decade of the 2000s, growth accelerated and its volatility decreased, as in most of the comparator countries, indicating a convergence of macroeconomic dynamics towards sustainable growth paths. Thus, the slow growth observed before the 2000s was largely offset.
- The sector distribution of value added since the early eighties shifted slightly towards services and has not evolved significantly with agriculture still accounting for a relatively high share of GDP.
- Growth is still driven by private and public consumption, and investments, which were expected to accelerate growth, have remained concentrated in sectors that create little value added. Investment in Morocco is characterized by the high share of public enterprises in capital formation, low level of diversification and its growing concentration in mechanical and electrical industries and the construction sector.
- Foreign direct investment (FDI) inflows have been fairly low in relation to the comparator countries. However, in recent years, Morocco has enjoyed relatively strong FDI growth.
- Foreign trade remains one of the Moroccan economy's weak points. Exports are geographically concentrated and their growth falls short of their potential. The rise in imports of energy products since 2009, and the resumption of food product imports since 2007, are affecting the trade balance as a result of rising raw material prices and, indirectly, the subsidy policy pursued by the Moroccan government (policy being revised since mid-2013).
- As far as competitiveness is concerned, growth is characterized by the low contribution of total factor productivity. By sector, the calculation of total factor productivity (TFP) between 2000 and 2012 indicates higher productivity in the metallurgical, mechanical and electromechanical industries (MMEI), a sharp decrease in extractive industries and stagnation in the other sectors.
- The private sector is sluggish: relatively large size of the informal sector, the absence of medium-sized enterprises due to the difficulty faced by SMEs in expanding and the low level of innovation are indicators of the private sector's sluggishness.

- The unemployment rate fell steadily during 2000 – 2012, from 13.4% in 2000 to 9% in 2012. Nevertheless, growth-related job creation did not benefit all the age groups and could not absorb the influx of new graduates. Thus, the unemployment rate for young men rose again after 2003 and for young women from 2006. There are also very wide regional employment disparities which must be taken into consideration in order to maintain social cohesion.
- Between 2001 and 2007, the poverty rate dropped from 15.3% to 9% and vulnerability from 22.8% to 17.5%. Despite the significant progress made, the persistence of poverty and vulnerability is an indicator of the non-inclusive nature of economic growth.

Introduction

Morocco has experienced relatively steady growth over the last fifty years, which has resulted in the tripling of per capita income. Since the late eighties, per capita GDP growth has accelerated to an annual average of 3.2%.

However, while they may be satisfactory over the long term, the Moroccan economy's growth rates are below those of many emerging countries. The growth rates recorded also fall far short of the country's growth potential. In addition, the growth model adopted by the country has shown limitations that need to be identified and addressed in order to ensure more stable, qualitative and inclusive growth.

Before examining these limitations in the second section of this chapter, the first section will look at the main public policies that have made a major contribution to the continuing improvement of the investment environment and to developing a private sector that will fully play its role as an engine for economic growth in Morocco.

1.1 Economic Policies in Support of Growth

Since independence, Morocco has implemented various public policies to promote economic growth, first by relying

on the public sector, in the absence of a viable and efficient private sector, and then by gradually providing the latter with the means to grow stronger and play a more significant role in the process of wealth creation.

Ambitious reform programs implemented since the nineties have sought to reconcile economic liberalization, poverty reduction and human capital development. These reforms were undertaken in the wake of the economic policies implemented under the Structural Adjustment Program (1983-1993), the priority of which was to restore macro-economic stability. Concomitantly, many economic, institutional and legal reforms were implemented. These reforms accelerated Morocco's integration into the global economy, strengthened the country's attractiveness to investors and improved the effectiveness of public interventions.

1.1.1 Stabilization of Macroeconomic Balances

The macroeconomic stability objective was achieved in the late 90s. The budget deficit was reduced from 10.1% of GDP in 1980 to 3.5% in 1990. In 1999, public finances recorded a surplus of 0.9% of GDP. Inflation was brought down from 3.9% in 1989 to 0.7% in 1999. Overall debt fell from 104.7% of GDP in 1990 to 91% in 1999 and the external debt stock dropped from 77.9% of GDP in 1990 to 51.4% in 1999.

Thus, by 2000, macroeconomic balances were restored and maintained during the growth acceleration phase between 2000 and 2007 (Table 1.1).

Table 1.1: Macroeconomic balances in percentage of GDP (2000-2007)

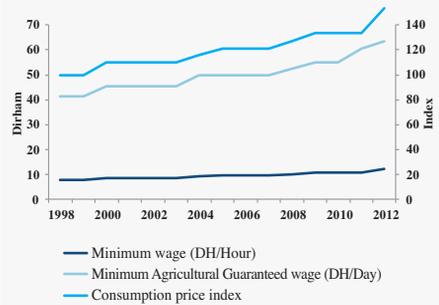
Year	Budget deficit	Public debt	Current payments
2000	-2.2	73.5	-1.3
2001	-4.3	65.8	4.3
2002	-4.9	64.6	3.7
2003	-4.2	61.5	3.2
2004	-3.8	58.6	1.7
2005	-6.2	61.9	1.8
2006	-2	56.8	2.2
2007	-0.1	53.1	-0.1

Source: Ministry of the Economy and Finance

- **Privatization and Control of Wages and Prices**

This period's macroeconomic performance is partly linked to the wave of privatization during the 90s and 2000s (which obtained MAD 100.7 billion for the government between 1993 and 2007²) and the control of wages and prices, up to 2010 (figure 1.1).

Figure 1.1: Trend of minimum wage and consumer prices



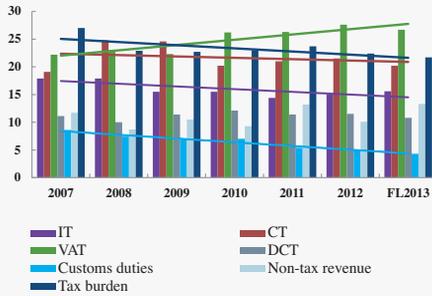
Source: HCP & World Development Indicators

- **Tax Reform**

The main objectives of the tax reform embarked upon several years ago are: reduction of the tax burden, modernization of the tax administration, management of the tax base, tightening of control and harmonization with international tax systems. Like many countries, the revenue structure highlights a marked increase in the share of value added tax (VAT), compared to income tax (IT) and, to a lesser extent, corporation tax (CT) (Figure 1.2).

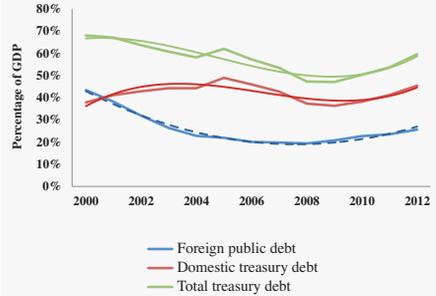
² Source: Ministry of the Economy and Finance: Results of privatization between 1993 and 2007.

Figure 1.2: State revenue structure



Source: Ministry of the Economy and Finance

Figure 1.3: Public debt as percentage of GDP



Source: Ministry of the Economy and Finance

- Active Debt Management

Since 1996, Morocco has adopted active debt management principles. The first instrument of this management is the transformation of bilateral debts into private investments. Between 2000 and 2007, the conversion of debt into private investments represented USD 892 M and USD 986 M in public investments through bilateral debt cancellation. Since 2007, very few operations have taken place as a result of the cancellation of the Paris Club's bilateral debts.

Budget balance control and active debt management helped to reduce debts until 2010 (figure 1.3).

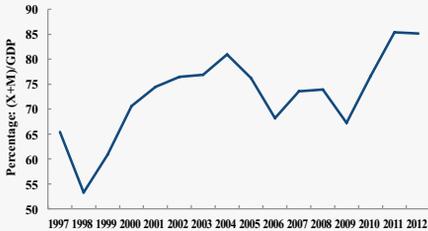
1.1.2 Openness of the Economy

- Free Trade Agreements

Parallel to the restoration of macro-economic balances, the implementation of a liberalization policy of trade and foreign investments significantly increased the Moroccan economy's degree of openness (Figure 1.4). This openness was initiated in 1987 with the accession to GATT, and then to the WTO (Marrakech Treaty, 1994) and continued with the signing of several free trade agreements³. Trade liberalization was accompanied by the adoption of the Investment Charter in 1995 and the overhaul of the Customs Code in 2000.

³ With the EU (1996) effective in 2000, the United Arab Emirates (2001) effective in 2003, the USA (2004) effective in 2006, Egypt, Jordan and Tunisia, signatories of the Agadir Agreement (2004), effective in 2007), and Turkey (2004) effective in 2006.

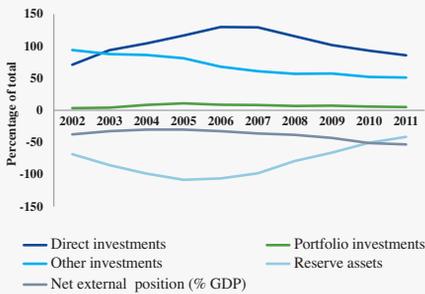
Figure 1.4: Trend of the economy's openness level



Source: World Development Indicators (WDI)

Up to 2007, trade liberalization, privatization and active debt management accelerated FDI flows as shown in figure 1.5.

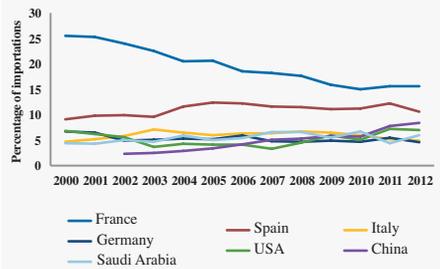
Figure 1.5: Net external position chart



Source: Ministry of the Economy and Finance

This openness has also resulted in a change in the market shares of importers of Moroccan goods and suppliers of goods and services (Figure 1.6). This trend, in particular, reduced France's market dominance and resulted in a higher contribution by China to imports. The same trend is observed for Morocco's customers (Figure 1.7).

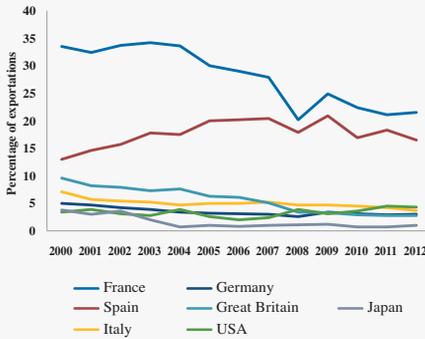
Figure 1.6: Origin of imports



Source: Ministry of the Economy and Finance

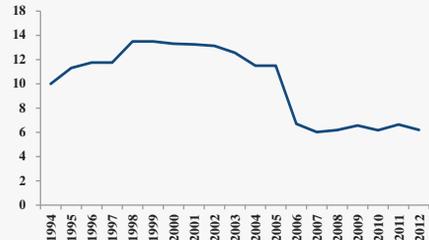
Openness has also led to an increase in the volume of trade and in bilateral trade deficits, showing that the Moroccan market's openness has chiefly benefitted supplier countries and has not yet produced the expected effects on Moroccan exports.

Figure 1.7: Destination of exports



Source: Ministry of the Economy and Finance

Figure 1.8: Trend of lending rates



Source: Bank Al-Maghrib

1.1.3 Facilitation of Access to Financing

The structural reforms that modernized the Moroccan financial system were preceded by measures that gradually facilitated access by businesses and households to the credit market. In 1991, lending rates were deregulated for most short, medium and long-term credits and export credit was liberalized in June 1995. The impact on lending interest rates was initially quite low because of weak performances by banks (Figure 1.8). However, as from 2006, financial sector reforms and the accompanying shift in monetary policy resulted in a 58% drop in lending rates.

These reforms also contributed to the development of the capital market, thus providing businesses with an alternative means of financing their investments.

Furthermore, the government has implemented a series of measures and initiatives to facilitate the financing of small and medium-sized enterprises (SME) by mobilizing significant budget financing and external lines of credit at favorable financial terms. Guarantee funds were also established to support the loans granted to SMEs by the banking system.

Similarly, action was taken to financially back and support young entrepreneurs, especially young graduates. Thus, a microcredit policy was promoted by the public authorities to provide the rural and peri-urban poor with access to financing for small income-generating projects.

1.1.4 Growth and Employment-Oriented Industrial Policy

To address the private sector's weakness in the wake of independence, the Public Authorities created public enterprises and assigned them the mission of establishing an industrial base in sectors as diverse as phosphates, textiles, cement, tobacco, agribusiness, oil refining etc.

Throughout the 60s and 70s, the Government, aware of the need to strengthen the private sector to enable it to play its role of engine for growth, implemented import-substitution, export promotion and Moroccanization policies aimed at helping Moroccan entrepreneurs to take control of various existing enterprises. These different policies have undoubtedly helped to strengthen the Moroccan private sector and create a relatively diversified productive base, but the results in terms of growth and job creation have not met expectations.

The debt crisis of the early 80s and the Structural Adjustment Programs that were implemented to lift Morocco out of the crisis provided opportunities for the country to change economic policy, in general, and industrial policy, in particular.

To that end, a liberalization process was adopted and the State disengaged from most of its industrial enterprises through privatization, which benefitted not only foreign investors but also the Moroccan private sector. Thus, some public services were transferred to the private sector, especially in the areas of electric power generation and water and electricity distribution. The Law on "Moroccanization" was abolished and foreign investments were strongly encouraged by a series of tax and financial incentives.

However, it was not until the late 90s that there was a major turning point in Morocco's industrial and economic policy, with the formulation of strategic plans. Many strategies were launched such as the Emergency Plan for the industrial sector, the Green Plan for agriculture, the National Energy Strategy, the "Plan Azur" and the Vision 2020 for tourism, the "Morocco Digital Strategy"⁴, the Halieutis Plan for fisheries, Vision 2015 for handicrafts and, more recently, the 2014-2020 Industrial Acceleration Plan.

⁴ National Strategy for Information Society and Digital Economy, 2009-2013.

These plans underpinned the growth acceleration that Morocco has experienced since the year 2000, owing to the visibility they offered to investors, the general mobilization of public and private actors to ensure their success, and a wide range of resources and measures to facilitate their execution and the monitoring of their implementation by the country's highest authorities.

However, these sector strategies with undeniable economic and social impacts raised the issue of the overall soundness of sector economic policies. Indeed, the existence of an overall framework to provide the required consistency of the above-mentioned policies and other policies implemented by the Government would have helped to prevent duplication, increase synergies and facilitate coordination among the different stakeholders. This observation was made on several occasions during consultations with national actors and external donors during the preparation of this report.

1.1.5 Improvement of Physical Investment Environment

Central government plays a predominant role in improving the general conditions of economic activity through infrastructure development in the areas of roads and motorways, railways, ports, airports, water

and electricity production and distribution, etc. In addition, it has stepped up its interventions in industrial zones and logistic infrastructure development and the public training system, which are investments aimed at creating adequate conditions to enable businesses to maintain an acceptable profitability level.

Public enterprises and establishments thus invested MAD 438 billion between 2008 and 2013⁵. The main public investors in 2012 and 2013⁶ were the Office Chérifien des Phosphates (MAD 35 billion); the National Electricity and Drinking Water Authority (MAD 18.8 billion); the Savings and Management Fund (Caisse de dépôt et de gestion) (MAD 17.9 billion); the AI Omrane Holding Group (MAD 13.7 billion); the National Railway Authority (MAD 13.5 billion); the Tangier Mediterranean Special Agency (MAD 8.3 billion); and the National Motorway Company of Morocco (MAD 4.3 billion).

1.1.6 Improvement of Social Cohesion

Social cohesion is a key objective of all government policies, not only because cohesion is an end in itself, since it contributes to the well-being of individuals and the community, but also because, without it, it would be difficult to develop a sustained and lasting activity in a sound and peaceful

⁵ Report on the public establishments and enterprises sector accompanying the 2014 Finance Law.

⁶ Ibid.

environment. In this regard, Morocco has for several years made human development a top priority and established instruments to achieve its set objectives. It is the case, for example, of the National Human Development Initiative which targets the least privileged population in the rural and the peri-urban areas.

This is also the objective of subsidies granted by the Government to maintain affordable prices of basic products for consumers. Thus, from 2009 to 2013, the share of the general government budget allocated to cover the compensation cost (subsidy cost) increased by 236.8%⁷ from MAD 12.5 billion to MAD 42.1 billion, peaking in 2012 at almost MAD 55 billion. Over the same period, the accumulated amount of this cost reached a total of MAD 192.1 billion, comprising 82.5% for oil products, 10% for sugar and 7.5% for flour.

While the role of compensation in maintaining social cohesion is clearly undeniable, the non-targeting of subsidies remains a major weakness that the Government is trying to address. Doing so should ensure greater equity for this public action and, at the same time, reduce budgetary expenditure thereby creating new fiscal spaces for public investments in priority sectors. Other instruments were developed

to enhance the efficiency of the Government's social actions: (i) the gradual generalization of Mandatory Health Insurance (MHI), (ii) the Medical Assistance Scheme (RAMED), and (iii) the establishment of a system of compensation for loss of employment.

In the area of employment, several programs were established to reduce the unemployment rate, especially for young graduates: Idmaj (Integration), Moukawalati (My business), Ta'hil (Qualification) etc.

1.2 A Model Inducing Relatively Sustained Growth but with Serious Limitations

Since Morocco's independence, economic growth has witnessed three distinct phases: a first phase covering the first two decades of independence with relatively high growth rates under the impetus of economic and social development plans. As a result, throughout the 70s the average annual growth rate was 5.4%.

The second phase followed the debt crisis the country experienced in the early 80s resulting in a sharp decline in economic activity in the wake of the structural adjustment programs which initially impacted on demand and consequently on the growth rate. The average annual growth rate during the 90s did not exceed 2.4%.

⁷ Source: Ministry of the Economy and Finance.

The third phase started in the late 90s with a strong revival of growth due mainly to the positive impact of the different reforms implemented in the preceding years, consolidation of agricultural value added as a result of more abundant rainfall, and efforts made to improve water infrastructure and modernize agricultural production techniques as well as the improvement of internal and external macroeconomic balances. The country achieved an average annual growth rate of almost 5% during the 2000s.

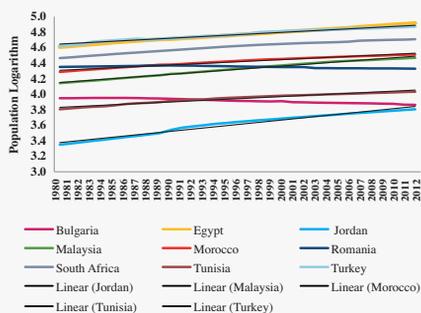
Morocco, over a long period, achieved sound performances in economic growth in relation to comparable, oil importing countries. The country showed strong resilience in the face of the 2007 financial crisis and during the period of political and social instability that has characterized the region since 2011. Indeed, despite the strong pressure of these events on macroeconomic balances, Morocco achieved a 4.2% average annual growth rate between 2008 and 2012, which is a significantly better performance than that achieved by other countries in the region.

However, this performance should not conceal the fact that the Moroccan growth model has reached its limits and that it is becoming critical to reformulate it in order to take full advantage of its potential including, in particular, its demographic dividend, yet insufficiently tapped and its

openness to the world in particular its geographic location between one of the world's biggest markets, Europe, and a rapidly growing market, Africa.

Indeed, given the demographic trend, macroeconomic performances achieved by the Moroccan economy must be put in perspective. Morocco's population grew annually by 0.69% on average between 1980 and 2011, a rate identical to Tunisia's and lower than that of Egypt (0.76%) and Malaysia (1.06%). Despite a moderate population growth rate (Figure 1.9), per capita GDP growth⁸ was lower than that of all lower middle-income countries (LMIC). Only Jordan and Romania obtained a lower per capita growth rate. As a result, the country's development lagged behind until the late 1990s.

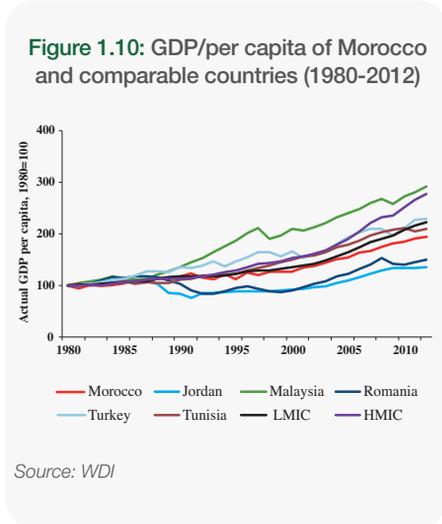
Figure 1.9: Population growth rate of Morocco and comparable countries (1980-2012)



Source: WDI

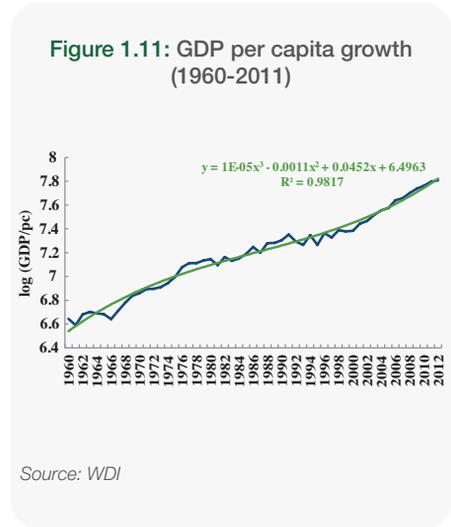
⁸In constant dollars.

The slow growth observed in the 90s was, partially, made up during the first decade of the 2000s. However, this catch-up did not enable the Moroccan economy to join the upper middle-income group of countries (Figure 1.10).



These observations are confirmed by an analysis of the growth acceleration phases. Morocco experienced only one acceleration phase over a 50-year period. Over the 1960-2011 period, the per capita GDP growth curve reveals a turning point in 1996 and growth acceleration⁹ from 2000. Average per capita GDP growth over the 2000-2012 period exceeded 3.5%, and growth acceleration above 2% for eight years, after the start of acceleration¹⁰.

However, this growth acceleration phase was interrupted by the 2007 financial crisis (Figure 1.11).



The existence of a single acceleration phase partly explains the Moroccan economy's difficulties in joining the group of upper middle-income countries. This phase, however, coincided with the completion of a major series of reforms, which indicates the possibility of a new growth acceleration phase provided a new reform program is launched. In order, therefore, to understand the difficulties of the Moroccan economy to remain on a strong and sustainable growth path, it is necessary to examine the limitations of the growth model adopted by the country.

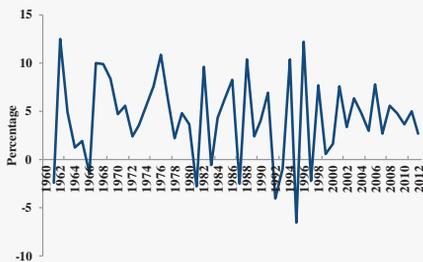
⁹ Hausmann R. , Pritchett L., Rodrik D., 2004.

¹⁰ Criteria retained by HRV.

1.2.1 Volatile Economic Growth

Morocco's economic growth is volatile (Figure 1.12). *This volatility is linked to the concentration of production in a small number of sectors*, namely the raw materials¹¹ and agricultural sectors which are highly dependent on world markets and climatic conditions.

Figure 1.12: Annual growth rate of the Moroccan economy (1960-2012)



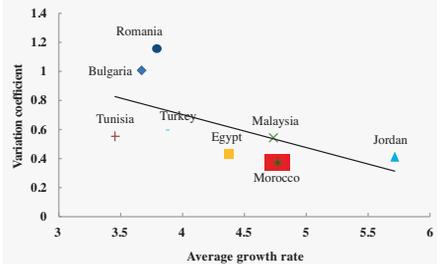
Source: WDI

However, even though economic¹² growth volatility is at first glance high, it remains slightly lower than the standard for all the comparator countries over the 1980-2011.

In addition, throughout the first decade of

the 2000s, Morocco's economic growth volatility decreased (Figure 1.13).

Figure 1.13: Economic growth volatility between 2000 and 2011



Source: WDI

1.2.2 A Fairly Static Production Structure

Although, since the early nineties, there has been a slight shift in GDP distribution towards services, structural transformation at sector level has not been significant¹³

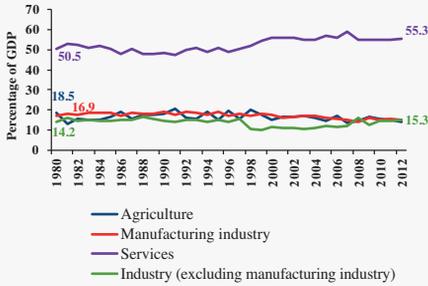
(Figure 1.14). In 2011, agriculture whose contribution is highly dependent on rainfall, accounted for 14.3% of GDP compared to 18.5% in 1980, industry 15.3% compared to 16.9% in 1980, and services 55.3% compared to 50.5% in 1980.

¹¹ Motthagi . L., 2011.

¹² Measured by the coefficient of variation (ratio standard deviation to mean).

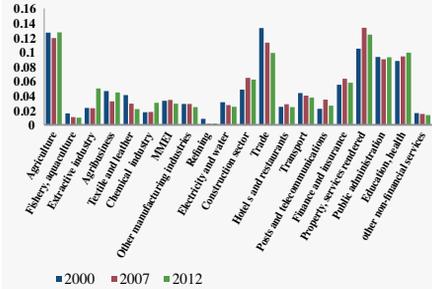
¹³ This does not mean that significant changes did not take place at the level of industries (MMEI, transport...).

Figure 1.14: GDP sector break-down (1980-2012)



Source: WDI

Figure 1.15: Value added break-down by sector in percentage



Source: 1998-2012 Supply and use tables

During the growth acceleration phase from 1997 to 2007, agriculture, trade and real estate property were the sectors that generated the highest value added (Figure 1.15). However, there was relatively little value added in the sectors of tradable industrial products¹⁴ and, to a lesser extent, extractive and food industries. Growth acceleration was, therefore, not followed by the creation of value added in the technology growth sectors. This is probably an obstacle to the Moroccan economy's shift towards a higher stage of development.

1.2.3 Domestic Demand-driven Growth

The economic performances achieved since first decade of the 2000 are explained mainly by domestic demand expansion

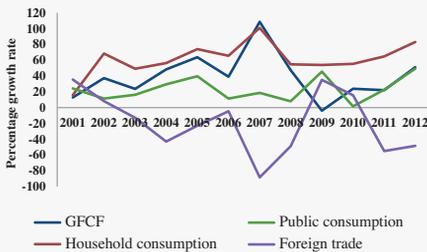
driven, among others, by affordable financing. Indeed, bank liquidity benefitted from massive foreign exchange inflows from the privatization of several public enterprises, the tourist boom and the buoyancy of remittances from Moroccans residing abroad. The increased liquidity consequently led to falling interest rates, resulting in affordable financing for consumption and private sector investments. Taking advantage of this situation and the exceptionally high tax revenue, the adoption of an expansionary fiscal policy boosted domestic demand while preserving price stability, especially through subsidies.

For its part, and before being affected by the 2007 crisis, investment's contribution to growth rose to equal that of household consumption (figure 1.16). After the crisis,

¹⁴ MMEI, textiles and leathers, chemical industries.

the cyclical rebound of foreign trade and buoyant household consumption offset the declining investments.

Figure 1.16: Contribution of demand components to growth in percentage (2001-2012)



Source: 2000-2012 Supply and use tables

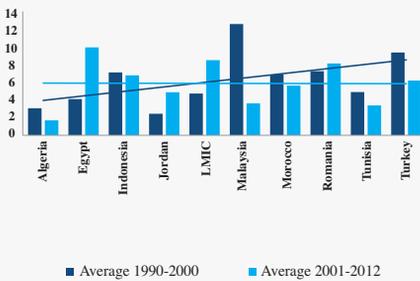
However, this domestic demand-driven growth model showed its limits since it (i) widened the public finance deficit due to the burden of certain fixed expenses (payroll, compensation); (ii) led, in the context of a relatively small-scale open

economy like Morocco, to a significant increase in imports, especially consumption goods, thus widening the trade deficit in the absence of adequately buoyant exports and (iii) limited the opportunities for firms to engage in large scale production at competitive costs.

International experience shows that similar economies equal in size to Morocco or larger have only developed by anchoring growth to large external markets with a high growth potential. Admittedly, in the case of a country like Morocco, it is quite conceivable to use demand as a variable to be activated for counter-cyclical purposes, but to consider it as an engine of long-term growth would be to inevitably fall into the macroeconomic imbalance trap and ultimately weaken the impetus of economic growth. A country like Malaysia has fully understood this, since its strategy is based on exports increasing its ability to generate a structural exportable surplus.

In Morocco, exports do not play this role of anchoring economic growth to a large market with high growth potential. Export growth rates in current dollars between 1990 and 2000 were lower than those of Asian emerging countries and Turkey, but higher than those of countries of the sub-region (Figure 1.17).

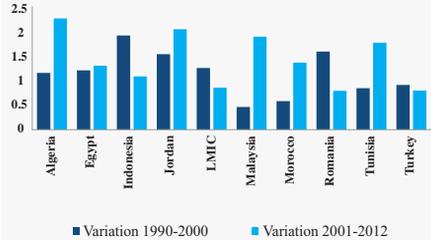
Figure 1.17: Average export growth rate



Source: WDI

From 2000 to 2012, Morocco's export growth rate decreased and was, on average, lower than that of middle-income countries. The export growth rate was the fifth highest of the nine comparator countries. In addition, calculation of dispersion coefficients reveals a significant increase in export growth rate volatility between the two sub-periods (figure 1.18).

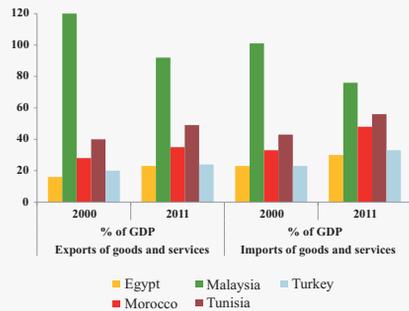
Figure 1.18: Export volatility



Source: WDI

Furthermore, Morocco's net exports decreased between 2000 and 2010, indicating adverse international specialization, which strengthens the image of a consumption-oriented economy (Figure 1.19).

Figure 1.19: Exports and imports in percentage of GDP



Source: WDI

1.2.4 Limited Private Sector Dynamism

Limited private sector dynamism in Morocco can be seen in (i) the significant share in the economy of the informal sector, (ii) importance of SMEs in the economy and their incapacity to increase their size, (iii) the private sector's low share in overall investment, (iv) low sector investment diversification, and (v) the limited inflow of foreign direct investments which embody modernity and dynamism.

- **Informal Sector**

While it is difficult to give exact figures on the extent of the informal sector in Morocco given its nature, it undoubtedly represents a very important share of the country's economy. The High Commission for Planning (HCP) conducted a survey on the non-agricultural informal sector in 2007. This survey reveals that this sector contributes 14.3% to wealth creation and provides 37.7% of non-agricultural employment.

The scale of this sector¹⁵ is often perceived as a real impediment to the modernization of Morocco's economy since (i) it competes unfairly with the modern sector, (ii) it does not apply the regulations in force relating to working and remuneration

conditions for employed staff, and (iii) the inability of informal firms to gain access to finance limits their growth. In this regard, the 2007 HCP survey revealed that only 1.1% of informal sector investment financing is covered by bank loans.

The sector's characteristics prevent it from scaling up businesses into modern enterprises of varying sizes.

Indeed, according to the same survey, 3/4 of informal production units employ a single person. It is obvious that the size of the informal sector is an indication of serious malfunctions which cause economic operators to prefer clandestine activity to declared formal activities. The tax burden, strict labor legislation, and high labor taxation and other social taxes are contributory factors to the slow progress in modernizing and stimulating Morocco's private sector.

The informal sector's size in the Moroccan economy is also a sign of social precariousness, because a high proportion of informal production units are established by people who are unable to find a place in the modern sector as wage earners, and who are forced to engage in often very unprofitable independent activities (57.4% of these units are engaged in trading).

¹⁵ Between 1999 and 2007, the number of informal production units increased from 1.233 million to 1.550 million, representing an increase of 40 000 units per year, according to HCP surveys.

- **Predominance of Small and Medium-sized Enterprises**

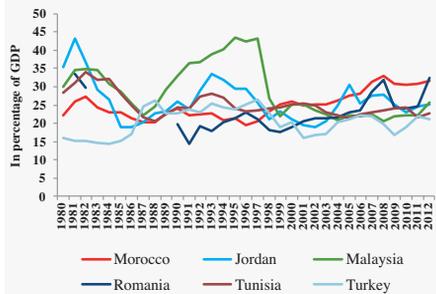
Over 95%¹⁶ of Morocco's productive fabric comprises of small and medium-sized enterprises which provide 50% of employment, 20% of value added, 40% of production, 30% of exports and 50% of investment. These enterprises include a high proportion of small enterprises.

However, their development is limited by various obstacles including issues of financing, the quality of human resources and the predominance of outdated management. Consequently, small enterprises in Morocco tend to remain small and large ones tend to remain large resulting in a lack of medium-sized enterprises (the missing middle), the private sector category which tends to be the most innovative in other countries. In this regard, the transition matrix presented in Table 7.3.4 clearly shows that small enterprises fail to develop since the probability of an enterprise with fewer than 10 wage earners to have more than 100 wage earners after 5 years, is negligible (0.4%).

- **Limited Private Sector Share in Overall Investment**

Overall investment measured by Gross Fixed Capital Formation (GFCF) accounted for 31.4% of GDP in 2012 and averaged 28.5% of GDP between 2000 and 2012. Since 2004, Morocco also has the highest investment rate in the sample of comparator countries. Between 2001 and 2012, total investment contributed 39.5% to economic growth (Figure 1.20).

Figure 1.20: Total investment in percentage of GDP

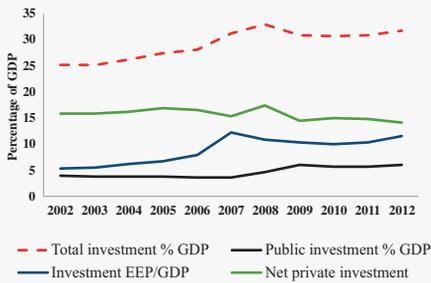


Source: WDI

¹⁶ Source: General Confederation of Enterprises of Morocco.

One of the characteristics of investment in Morocco in recent years has been the decline in private investment, which in 2012, accounted for 44.6% of total investment compared to 62.7% in 2002 (Figure 1.21). Indeed, the share of public enterprises in capital formation reached 45% in 2012 compared to 22% in 2000. Total direct and indirect public investment accounts for 55.4% of total investment.

Figure 1.21: Private investment and public investment in percentage of GDP (2001-2012)



Source: WDI-Ministry of the Economy and Finance

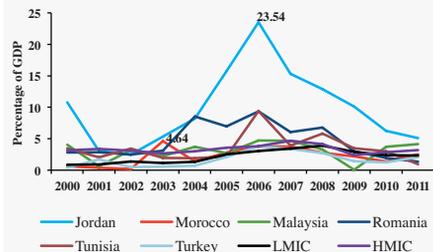
- **Little Diversification of Investment by Sector**

By sector, investments are less diversified, and tend to be concentrated in mechanical and electrical industries and the construction sector. In comparison, there have been modest investments in agriculture.

- **Limited Foreign Direct Investment (FDI) Inflow**

While Morocco has received significant FDI inflows compared to the other regional countries, in recent years, and their contribution to GDP rose from 1.2% in the 80s to 2.2% during the 2000s, FDI inflows remain relatively low compared to those received by the comparator countries. Nevertheless, FDIs are fairly diversified and distributed among telecommunications, industry, tourism, real estate and the financial sector. It is, however, impossible to identify any trend apart from increased FDIs in the real estate sector since 2006, and a cyclical FDI component in industry and tourism (Figure 1.22).

Figure 1.22: Foreign Direct Investments in percentage of GDP (2000-2011)

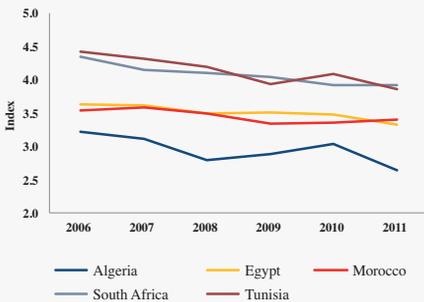


Source: WDI

1.2.5 Weak Export Competitiveness Impacting Negatively on the External Balances

Despite the many free trade agreements signed and the various export liberalization and support measures and policies implemented, Morocco has continued to suffer from a persistent trade imbalance for almost three decades mainly as a result of poor export performances. The weak performance of exports in the global market is explained by the fact that exports are dominated by agricultural, chemical and textile products. Since the start of the growth acceleration phase in the late nineties, the export sophistication level has not changed significantly (Figure 1.23).

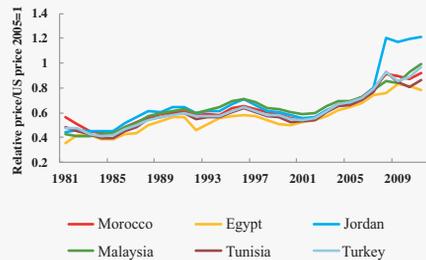
Figure 1.23: Export innovation and sophistication index



Source: Data Market, Federal Reserve of St Louis

Furthermore, export prices have not increased more rapidly than those of the main competing emerging countries (Figure 1.24). This suggests that the weak competitiveness of Moroccan exports is probably more the result of technology and innovation content (that would be low) than their price.

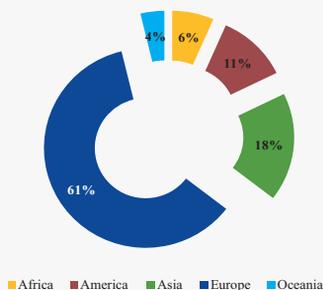
Figure 1.24: Trend of prices of exports from Morocco and comparable countries



Source: HCP

An aggravating phenomenon is the fact that the concentration of exports towards Europe does not foster the expansion of Morocco's market share in a context of low growth in the main European client countries (Figure 1.25).

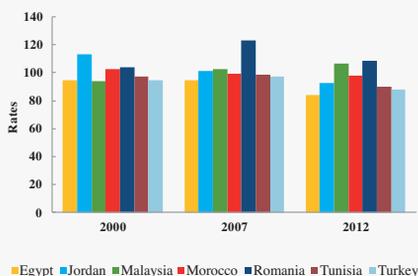
Figure 1.25: World export break-down in 2012 (total percentage)



Source: HCP

Morocco, like all the comparator countries, with the exception of Malaysia, has witnessed a deterioration of its foreign trade coverage rate owing to a drop in the level of activity in Europe and lack of sophistication of exported products limiting its ability to diversify its trading partners (Figure 1.26).

Figure 1.26: Trend of cover rate for Morocco and comparable countries



Source: WDI

Furthermore, the market share of Moroccan exports has actually dropped since 2000. Although the share of exports in GDP in 2012 exceeded that of all lower middle-income countries (LMIC), Morocco's world market share of exports fell from 0.15% in 1999 to about 0.10% in 2012.

Low value added creation by the export sector impacts the macro-economic balances because, in addition to the export difficulties observed, there has been a significant increase in imports in recent years due to (i) a rise in the oil bill (27% of imports in 2012), (ii) increased public investments especially those inducing an increase in imports, (iii) and the country's unprecedented economic openness since the early 2000s.

Up to 2007, the trade deficit was offset by the surplus on services and transfers. However, since then, these two items have themselves been affected by the crisis, which has resulted in the deterioration of the external accounts. Consequently, the current account deficit widened to 10% of GDP in 2012 compared to an average surplus of 2.4% of GDP between 2001 and 2007.

The widening current account deficit has created external financing requirements averaging 8.64% of GDP since 2008.

Since non-debt generating external flows (FDIs and grants, in particular) only contributed up to 36% of external financing requirements, public and private debt took over and financed up to 60% of these requirements. This resulted in a significant increase in external public debt which represented 26.9%¹⁷ of GDP in 2013 compared to 19.4% in 2008. The IMF considers this external debt level as still sustainable, but its future trend requires close monitoring.

Consequently, and since external financial flows are becoming inadequate to cover net financing requirements, it was necessary to draw on foreign exchange reserves for the entire 2008-2012 period with the exception of 2010. As a result, foreign exchange reserves covered only 4.2 months in December 2013 against 9 months in early 2009.

1.2.6 Low Factor Productivity Contribution

Total factor productivity is the metric for measuring the efficient use of economic resources in the production process. In this regard, the experience of emerging countries which have enjoyed strong growth has shown that high capital accumulation was a necessary but far from sufficient condition, since it has to be followed by a sharp increase in total factor productivity to produce the expected effects on long-term growth.

- **Low Total Factor Productivity**

Analysis of the production function provides an estimated total factor productivity growth rate of 0.18% per year between 1996 and 2007, during the acceleration phase, and an average annual decrease of 0.26%, since 2007 (Figure 1.27)¹⁸.

¹⁷ Source: Ministry of the Economy and Finance.

¹⁸ However, this analysis must be interpreted prudently given the data quality, the absence of essential variables such as the rate of use of production capacities and skilled labour, and given the restriction on coefficients (constant returns).

$y = A L^\alpha K^{1-\alpha}$ Y : value added, L: total employment (source: WDI and Ministry of Employment), K: capital stock (Source: Penn World Tables), A: technical progress. The estimated relationship is as follows: $\ln\left(\frac{y}{L}\right) = \ln(A) + (1-\alpha) \ln\left(\frac{K}{L}\right)$ Where y/L is the productivity by worker, K/L the capital by worker and α the labour share in value added.

Figure 1.27: Factor productivity growth rate

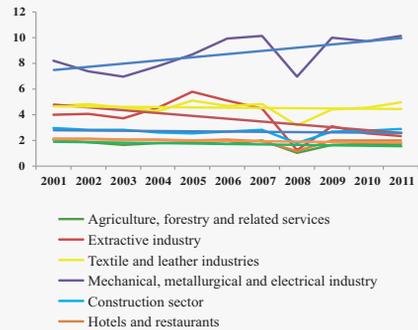


Source: Authors' calculations

By sector, the calculation of total factor¹⁹ productivity reveals higher productivity in the MMEIs between 2000 and 2012, a sharp drop in the extractive industries and stagnation in other sectors (Figure 1.28). Consequently, only one sector generates growth gains for the entire economy, whereas productivity is falling in major sectors of economic activity such as the extraction of

natural resources and, to a lesser extent, textiles.

Figure 1.28: Total factor productivity by sector



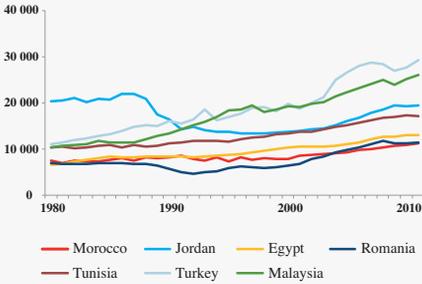
Source: 2000-2012 Supply and use tables and authors' calculations

- **Low Labor Productivity Growth**

Compared to reference countries, the labor productivity of Morocco (figure 1.29) has only increased at a relatively low rate, whereas the environment has greatly improved, following continued investment accumulation.

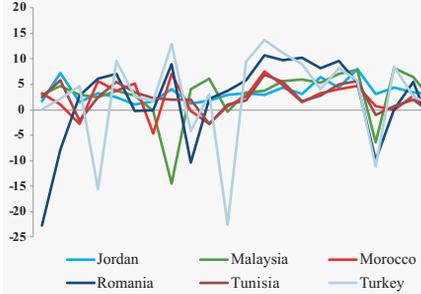
¹⁹ Evaluated on the basis of services provided by the labor and capital in the production. The Kendrick index of total factor productivity (Productivity Trends in the United States, NBER Princeton, 1961) is written $PTF = Q/(w_L + r_K)$ where Q is the industry's output at market prices, w_L is the remuneration of labor and r_K remuneration of capital.

Figure 1.29: Trend of labour productivity in Morocco (USD 1990) and comparable countries, 1980-2011



Source: WDI

Figure 1.30: Return on investment



Source: Authors' calculations

- Average Overall Return on Investment

The marginal return on investment²⁰ is in line with the averages of the comparator countries. Macroeconomic stabilization is accompanied by a decrease in growth volatility and a convergence of returns among countries (figure 1.30).

1.2.7 Weak Employment-Generating Growth, especially among Young People

According to the High Commission for Planning²¹, economic growth is expected to be low in terms of job creation. The employment elasticity with respect to growth is estimated at between 0.3 and 0.5, which does not factor in the absorption

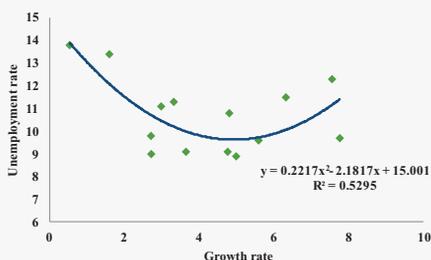
²⁰ Measured by the reverse of ICOR.

²¹ High Commission for the Plan, The sources of Morocco's growth, September 2005.

of the influx of young people onto the labor market. Along with labor market rigidities, the growing number of youths entering the market on account of the demographic transition that the country is experiencing, and lack of qualifications of some graduates is a major obstacle to reducing youth unemployment.

The low employment elasticity in relation to growth is corroborated by the fact that the relationship between economic growth and unemployment is not linear. Over the period analyzed (1996-2010), the minimum unemployment rate was reached at a growth rate close to 5% (Figure 1.31).

Figure 1.31: Unemployment-growth relationship in Morocco and comparable countries

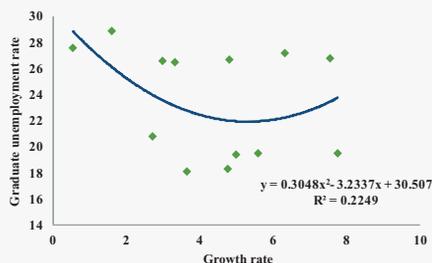


Source: WDI and authors' calculations

Furthermore, the impact of growth on graduate unemployment is low. Over the reference period, a 5.3%

growth rate is associated to a minimum graduate unemployment rate of 18% (figure 1.32).

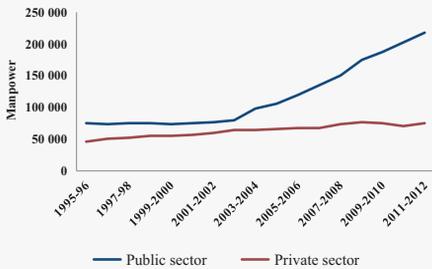
Figure 1.32: Growth-university graduate unemployment relationship



Source: WDI and authors' calculations

The low correlation between the trend of young graduate unemployment and economic growth is explained by the predominance of sectors such as agriculture and trading, which mainly employ unskilled labor. However, the sectors seeking skilled labor often face difficulties in finding the required profiles on the market despite government efforts in the area of vocational training (the manpower trained by the public sector, for instance, has doubled since 2004). The private sector, for its part, is not yet playing a very active role in taking over from the public sector in the area of training (Figure 1.33).

Figure 1.33: Trend of vocational training numbers

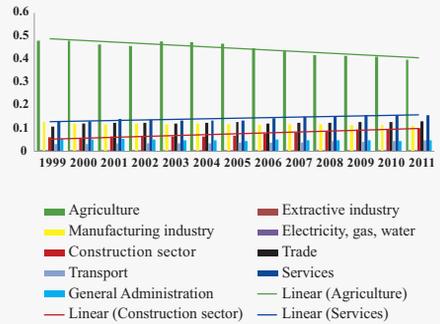


Source: Ministry of Employment

The agricultural sector absorbs the majority of the Moroccan labor force. Indeed, despite a steady decrease since 1999, agriculture offered 39.7% of jobs in 2011, 61% of which are occupied by women. The growing services sector accounted for 15% of jobs, trading 13% and the construction sector 10%. The declining manufacturing industry employed slightly more than 10% of the labor force, only 12% of whom are women (Figure 1.34).

This labor force is mainly composed of men. In 2011, for instance, the Moroccan economy employed 10.5 million people, three-quarters (7.5 million) of whom were men.

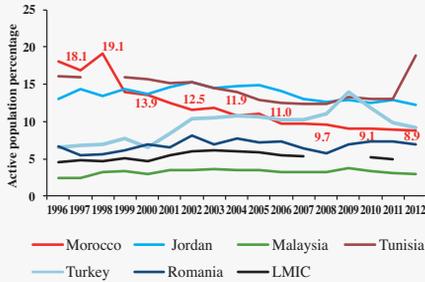
Figure 1.34: Employment by sector in percentage



Source: Ministry of Employment

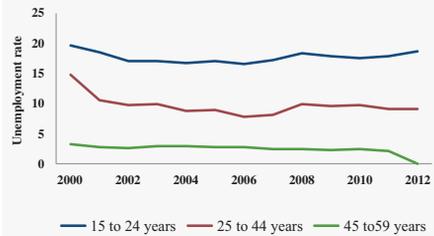
The unemployment rate fell steadily from 13.4% in 2000 to 9% in 2012. Compared to the comparator countries, Morocco experienced the sharpest drop in the unemployment rate between 1996 and 2012 (Figure 1.35). Both men and women benefitted from this falling unemployment rate.

Figure 1.35: Unemployment rate of Morocco and comparable countries in percentage



Source: WDI

Figure 1.36: Unemployment rate by age group



Source: Ministry of Employment

However, since 2011, the female unemployment rate has increased significantly reaching its 2005 level (10.2%). Women, in particular, are employed in sectors of activity that prefer unskilled labor (agriculture, textile) and/or offer low wages (hotels, restaurants).

The sluggish unemployment rate mainly concerns the 15-24 age group, which includes university graduates (Figure 1.36). Thus, while the overall unemployment rate decreased steadily between 2000 and 2011, the rate rose again for young men after 2003 and for young women from 2006.

There are wide regional employment disparities which must be taken into consideration if social cohesion is to be maintained. Thus, the unemployment rate in the Doukala–Abda region, for instance, is double (22.2%) that of the neighboring region of Casablanca (10.6%).

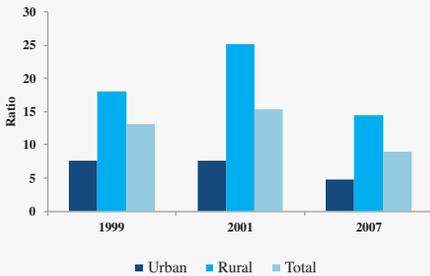
1.2.8 Largely Non-Inclusive Growth

According to household surveys conducted by the HCP, the overall improvement in living standards between 2001 and 2007, combined with the stagnation of inequalities, significantly reduced poverty and vulnerability²². Poverty dropped from

²² Economic vulnerability is understood in relation to illnesses, disability risk, bad weather or loss of employment.

15.3% to 9% at the national level, from 7.6% to 4.8% in urban areas, and from 25.1% to 14.5% in rural areas (Figure 1.37).

Figure 1.37: Poor population ratio depending on the national poverty threshold in 2007 (percentage of the population)



Source: HCP

Vulnerability was reduced from 22.8% to 17.5% at the national level, from 16.6% to 12.7% in urban areas and

from 30.5% to 23.6% in rural areas. In Morocco, poverty is associated with illiteracy and, more generally, lack of training. Despite the progress made, the persistence of poverty and vulnerability indicates that growth is still not very inclusive. Poverty also causes migratory movements inside and outside the country.

Despite these results, vulnerability remains high and there are considerable inequalities between regions, within regions, and between rural and urban areas. In addition, the fact that unemployment and precariousness affect a very high number of young people, including university graduates, proves that Morocco's growth has not been inclusive enough.



Chapter 2

Cost of Financing



Chapter 2: Cost of Financing

Key Messages

- Since 1980, the financing requirements of the Moroccan economy have largely been met, except for 1981-1985 during which these requirements experienced stringent rationing, and during the international financial crisis, particularly in 2011 and 2012, when the financing rose sharply to an annual average of 6.6% of GDP (2008-2012).
- Stable national savings as a percentage of GDP (24%) are insufficient to meet financing requirements, despite migrant remittances, which accounted for about 7% of GDP.
- The rapid increase in investments as a percentage of GDP, accounts for the growing financing requirements of the Moroccan economy since 2010.
- Domestic market debt covered the largest share of public sector needs between 2000 and 2012.
- Between 2000 and 2012, the spectacular growth in bank credit helped to meet private sector needs. In fact, the capital market remains undeveloped and fragile, compared to other countries. On the other hand, micro-finance, which is directed towards operators excluded from the credit market, is particularly well developed in Morocco and its beneficiaries account for 40% of Arab world clients.
- Moroccan real interest rates fell steadily between 2000 and 2007, but the financial crisis shock and the increased default risk have pushed them above 5% since 2009.
- The public sector can opt for financing on the domestic bond market or external borrowings. The spread of Morocco's sovereign debt in basis points in relation to American Treasury bills, allows the country to obtain financing on the international financial market. However, up to 2012, Treasury bill rates were attractive for the Moroccan Government, which preferred domestic debt.
- The financing cost of private sector investments remains high. The real lending interest rate has dropped significantly but remains above those of the comparator countries. In addition, the loan guarantee value is among the highest for middle-income countries.
- Diagnostic tests result in the following conclusions: (i) absence of a linear relationship between GDP per capita and the real interest rate between 1990 and 2010, (ii) existence of a negative relationship between private investment and the real interest rate, which does not rule out the assumption of a private investment financing constraint, (iii) absence of a causal relationship between bank credit to the private sector and GDP per capita since credit acceleration is not a sufficient condition for economic growth acceleration

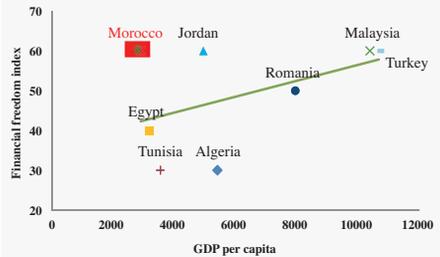
and, finally (iv) a normal situation for Morocco in relation to the comparator countries concerning the bypassing of the financing constraint through the self-financing of investments.

Introduction

The cost of financing could become a major constraint to growth, if it is consistently higher than the anticipated return on investment, to the point of dissuading investors from embarking on the development of new projects. The cost of financing has three dimensions: the real interest rate, credit period, and the required collaterals. The explanatory factors of a high investment cost are generally: i) limited access by the economy to financial markets, ii) inadequate financial intermediation and iii) lack of competition among banks as well as poor risk management.

In this chapter, the analysis of various aspects of the cost of financing leads to the general conclusion that access to finance is not a major constraint to Morocco's growth. According to international rankings, the Moroccan banking sector developed satisfactorily in relation to the comparator countries. While Morocco was ranked 103rd in economic freedom in 2014 by the Heritage Foundation, the score obtained by the country in financial freedom places it above the comparator countries in absolute value, and in line with them with respect to GDP per capita (Figure 2.1).

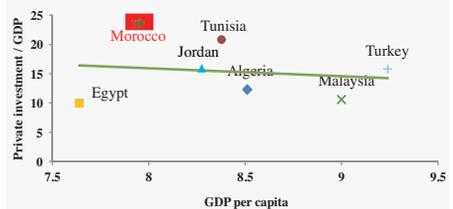
Figure 2.1: Financial freedom



Source: Heritage Foundation and WDI

At the same time, the average private investment rate is high. Morocco has the highest rate in relation to GDP among the comparator countries. In terms of GDP per capita, Morocco exceeds all middle-income countries (Figure 2.2).

Figure 2.2: Investment rate and GDP/per capita



Source: WDI

Nevertheless, persistent secondary obstacles are likely to slow down the business investment rate. Real interest rates are high, despite the liberalization of lending rates. The collateral required to obtain loans are also among the highest for emerging countries. Furthermore, weak financial sector competition enables banks to retain significant margins when liquidity is low in the inter-bank market²³.

2.1 The Moroccan Economy's Financing Requirements

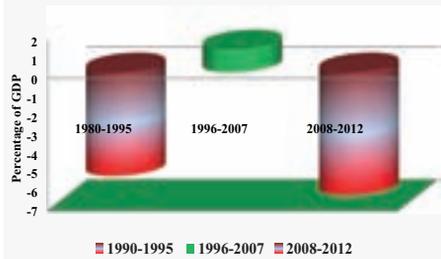
Since 1980, the financing needs of the Moroccan economy have generally been met²⁴. These were covered either i) by the banking sector and the domestic bond market, or ii) by the call for external savings²⁵.

2.1.1 Counter-cyclical Trend of Financing Requirements

Between 1980 and 1995, the structural adjustment period, average annual financing needs as a percentage of GDP rose to 5.5%. During the growth acceleration phase (1996-2006), the economy generated an average annual financing capacity of 1.4% of GDP, mainly as a result of privatization. However, since the international financial crisis, financing needs have accelerated, especially

in 2011 and 2012, and reached an annual average of 6.5% of GDP (Figure 2.3).

Figure 2.3: Finance Capacity/Need in percentage of GDP



Source: Ministry of the Economy and Finance

The gap between savings and investment accounts for the acceleration of the economy's external financing needs. This was particularly valid at the end of the period, when national savings fell and the investment rate increased steadily, driven by a counter-cyclical policy, whose effects in terms of growth were not fully felt in 2011 and 2012.

2.1.2 Insufficient National Savings

National savings as a percentage of GDP (24%) are insufficient to meet financing needs (Figure 2.4). The savings rate in relation to income remains below that of countries with strong growth. National savings increased

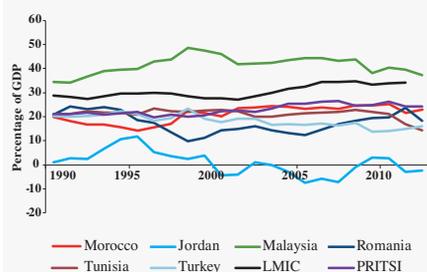
²³ Accentuated by the current payment deficit and the budget deficit since the 2007 financial crisis.

²⁴ Including since the 2008 financial crisis.

²⁵ Direct investments and loans on international markets or from bilateral and multilateral donors.

with the growth acceleration in 1996 but remained vulnerable to the international transmission of income shocks, since they were highly dependent on remittances from migrant workers. The latter accounted for 7.2% of GDP in 2011.

Figure 2.4: Gross domestic savings rate in percentage of GDP

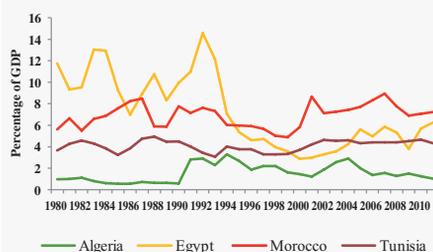


Source: WDI

Since 1996, Morocco has been the sub-regional country that benefits the most from migrant remittances as a proportion of GDP. The trend of the two savings aggregates, national and domestic, clearly establishes the importance of migrant savings in ensuring macroeconomic balance. Remittances from migrant workers recorded an average annual growth rate of 7.4% over the 2002-2007 period reaching 55 billion dirhams in 2007 (Figure 2.5). The economic slowdown, which affected the main host countries of Moroccan migrants, especially Spain, France and Italy, had a

negative impact on remittances from Moroccans residing abroad. These remittances decreased by 3.5% in 2008 and 5.4% in 2009 compared to a 17.4% increase in 2006 and 15% in 2007. The remittances resumed at rates of 8.3%, 7.4%, and 0.6%, respectively, in 2010, 2011 and 2012.

Figure 2.5: Migrant remittances in percentage of GDP



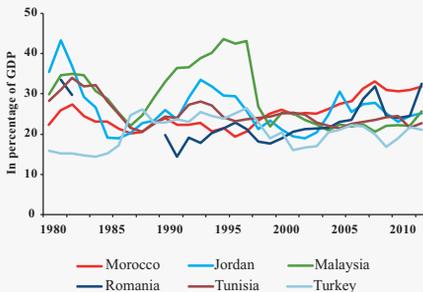
Source: WDI

Domestic savings, which represent about 20% of GDP, are insufficient to finance domestic investment. Moreover, the financial savings structure is still dominated by liquid savings resulting in a preference for short-term credit. This has prompted the Moroccan public authorities to take several incentive measures to extend loan maturity (housing savings plans, company savings plans, share savings plans, education savings plans) and to encourage enterprises to join the stock market.

2.1.3 Savings-Investment Balance

The rapid increase in investments as a percentage of GDP accounts for the growing financing requirements of the Moroccan economy since 2010. As a percentage of GDP, investment was identical in 2012 to that of Romania and Indonesia: 31.7% of GDP (Figure 2.6). The same year, private investment and public investment accounted respectively for 25.8% and 5.9% of GDP. In the PRESIMO model (Annex 2.1) used to develop the Moroccan economy's forecast scenarios, investment is explained by an anticipated production trend, capital productivity modification, the long-term real interest rate and the profit margin of enterprises. According to the model, a 1% increase in the long-term real interest rate would lead to a 5% drop in long-term investment²⁶.

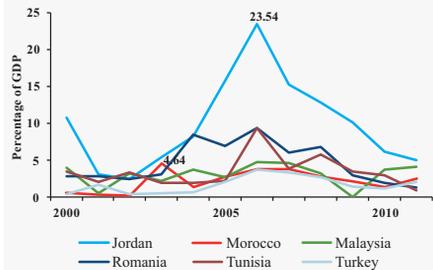
Figure 2.6: Gross fixed capital formation in percentage of GDP



Source: WDI

The temporal instability of foreign direct investments (FDI) does not guarantee coverage of the structural investment financing gap by savings. Between 2004 and 2011, FDI accounted for about 2.8% of GDP (Figure 2.7). The global financial crisis and the ensuing stagnation in Europe slowed down investments in neighboring countries²⁷. This drop had a significant impact on Morocco's main investing countries: France (-26.1%), Spain (-57.2%) and the United Kingdom (-47.1%). Morocco's strong resilience to the crisis is reflected in increased foreign investments, which reached USD 2.8 billion in 2012 compared to USD 1.6 billion in 2010.

Figure 2.7: FDI in percentage of GDP (2000-2010)



Source: WDI

Between 2004 and 2011, the average gap between investment and savings was 5.9% and net external finance needs rose to an annual average of 3.1% of GDP.

²⁶ For capital stock standardized at the stable state.

²⁷ The decline in FDI in 2008 and 2009 was by 26.3% and 29.2% respectively at end-September 2009.

However, after 2007, financing needs rose sharply, reaching 8% of GDP in 2011 and 7.4% in 2012. Between 2010 and 2012, the financing needs of Moroccan economy rose from 34.2 billion dirhams to 82.4 billion dirhams (Table 2.1).

Table 2.1: Finance needs in Morocco

National Economy Capital Account (million Drhs)	2010	2011	2012
Revenue			
Gross savings	233 336	223 954	20 993
Net capital transfers	-1	-2	1
Total	233 335	223 952	209 930
Expenditure			
Gross fixed capital formation	234407	246 394	259 680
Stock variation	33 251	42 168	32 697
Financing Capacity (+)/need (-)	-34 323	-64 610	-82 445
Total	233 335	223 952	209 930

Source: 2012 National Accounts (forecasts)

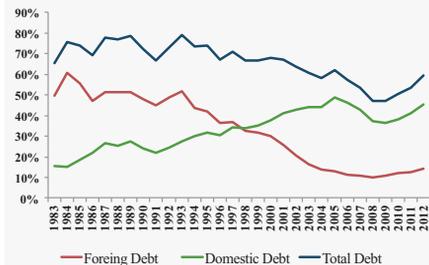
2.1.4 Unbalanced Financing Needs Among Institutional Sectors

Between 2000 and 2007, the entire Moroccan economy generated a financing capacity that resulted in a current balance of payments surplus, despite budget deficits.

After 2007, local currency debt rose, while the debt/GDP ratio which had been

steadily declining since 1990, rose above 50%, the generally accepted threshold for emerging countries, in 2012 (58.2%) (Figure 2.8). Indeed, after the 2007-2008 global crisis, the private non-financial enterprises used bank loans to meet their growing financing needs. Concurrently, the central government's budget situation worsened and Moroccan authorities preferred to seek financing on the domestic bond market.

Figure 2.8: Trend of the Treasury debt stock in percentage of GDP (1983-2012)



Source: Ministry of the Economy and Finance

The 2012 annual report of the Central Bank²⁸ emphasizes that the financing needs of the national economy rose to 82.4 billion dirhams in 2012 compared to 64.6 billion dirhams in 2011. This increase is mainly attributable to the deficit

²⁸ Banque Al-Maghrib, Annual report, p 72-75, 2012.

accumulated by public administration and non-financial enterprises. By institutional sector, the Central Bank data highlights a widening of the deficit to 30.7 billion dirhams in public administration and 67.9 billion in

non-financial enterprises. At the same time, household financing capacity was limited to 3.6 billion dirhams and that of financial enterprises to 11.5 billion dirhams (Table 2.2 & Figure 2.9).

Table 2.2: Financing need/capacity in millions of DH

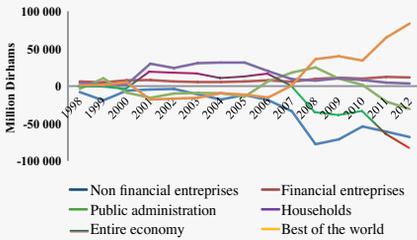
	Non-financial enterprises	Financial enterprises	Public Administration	Households	Privatization	Entire economy	Rest of the world
1998	-7870	6229	-3612	3870		-1383	1383
1999	-19254	5018	10450	2011		-1775	1775
2000	-6023	7845	-8840	1044		-5974	5974
2001	-4537	8287	-15511	29781		18020	-18020
2002	-3948	6324	-9795	24016		16597	-16597
2003	-11211	5383	-9181	30668	12000	15659	-15659
2004	-18053	5488	-9358	31392	10400	9469	-9469
2005	-11932	6048	-14136	31544	13800	11524	-11524
2006	-18669	7643	6469	19945	4800	15388	-15388
2007	-33521	5686	18001	9145	6100	-689	689
2008	-77797	9775	24800	7334		-35888	35888
2009	-71205	11071	9929	10424		-39781	39781
2010	-53829	10004	1511	8032		-34282	34282
2011	-61000	12500	-20600	4500		-64600	64600
2012	-67900	11500	-30700	3600		-83500	83500

Source: Ministry of the Economy and Finance

Since funds mobilized on the international financial market and foreign investment flows were unable to close the economy's

financing gap, reserve assets once again contracted in 2012 by 29.2 billion dirhams following a 20.3 billion drop in 2011.

Figure 2.9: Financing need/capacity by institutional sector



Source: Ministry of the Economy and Finance

2.2 The Moroccan Economy's Financing Arrangements

The financing of the Moroccan economy is based on three pillars: the banking system, a bond market established in 1996 and an insufficiently active capital market established in 1929 and reformed in depth between 1993 and 2012.

2.2.1 Public Sector Financing

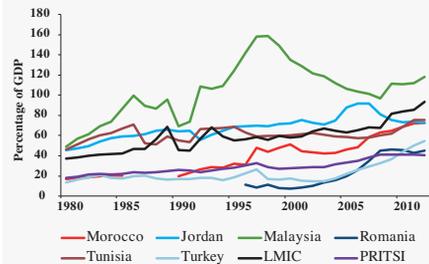
Domestic market debt covered the largest share of public sector needs between 2000 and 2012.

Domestic debt is preferred to foreign debt. The Treasury is financed mainly through Treasury bond issues. External financing is usually in the form of loans from international institutions and indirectly through international financial markets.

2.2.2 Bank Credit and Private Sector Financing

Between 2000 and 2012, the spectacular growth in bank credit helped to meet private sector needs. At the end of the period, Morocco caught up with Tunisia in terms of credit development (Figure 2.10). Property credit witnessed the most rapid growth since 2007 at the expense of equipment credit. The credit breakdown shows that private enterprises received about 75% of equipment credit and 85% of treasury credit over the period 2001-2012.

Figure 2.10: Trend of bank loans in percentage of GDP



Source: WDI

Since 2010, households have become steadily more indebted. Between 2009 and 2012, net credit flows to households rose from 19.1 billion dirhams to 20 billion dirhams. Thus, the credit granted to households grew by an annual average of 17.8 billion dirhams. In return, saving by individuals increased only by an annual

average of about 1.1 billion dirhams over the same period from 45.1 billion dirhams in 2009 to 48.5 billion dirhams in 2012.

The financing needs of non-financial enterprises were met by bank credit and the issuance of shares. In 2012, the credit amount was 50 billion dirhams and stock issues stood at 48 billion dirhams. On the other hand, financial enterprises recorded a financing capacity of 12.5 billion dirhams in 2011, by increasing their share of debt security issues to 17.3 billion dirhams to meet increased credit demand.

Nevertheless, faced with a sluggish stock market and a decline in credit growth since 2008, the use of the private debt market has increased significantly and seems to be an alternative choice for the economy's financing requirements. As proof, this market showed an average annual growth of 33% between 2006 and 2012 and the volume of issues rose from MAD 17 billion in 2006 to 78 billion in 2012.

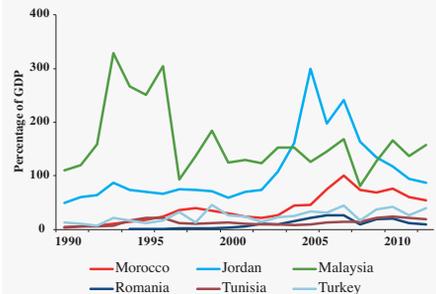
Overall, banking intermediation was strengthened and helped to improve net banking income. At the same time, the steady drop in bad and doubtful debts (BDD) up to 2012 helped to mitigate the risk of a banking crisis. The rate of doubtful debts out of total bank credit allocated to the economy stabilized overall at around

5%, a fairly moderate level and especially far from the 20% peak recorded in the middle of the past decade.

2.2.3 Capital Market

The capital market established in 1929 has witnessed many reforms aimed at modernizing the stock market, e.g. securing transactions by ensuring information transparency and the successful completion of transactions in securities and integrating the Moroccan capital market into the global financial market. However, market capitalization as a percentage of GDP, after developing rapidly between 2002 and 2007, has declined since 2011 (Figure 2.11), mainly on account of the financial crisis shock.

Figure 2.11: Market capitalization of listed enterprises in percentage of GDP



Source: WDI

Overall, the stock market remains fragile and undeveloped compared to other countries (Table 2.3). Because of a lack of liquidity, the Casablanca Stock Exchange is no longer represented in the MSCI Emerging Markets Flagship Index since November 2013 and is reclassified in the MSCI Frontier Markets²⁹.

Table 2.3: The stock market in Morocco and comparable countries

	Market capitalization (% of GDP)	Number of listed enterprises
Morocco	54.41	76
Jordan	-86.41	243
Malaysia	156.94	921
Romania	9.4	77
Tunisia	19.46	59
Turkey	39.12	405
Egypt	22.5	234
South Africa	159.3	348

Source: WDI

The size of market capitalization is relatively significant in the economy, but it declined from 76% of GDP in 2010 to 52% in 2013. This significant drop reflects the scarcity of new stock-exchange listings and the delisting of some issuers, as well as lower valuations. Accounting for 6% of the economy's financing in 2013, the amount of

funds raised through the Stock Exchange has remained limited.

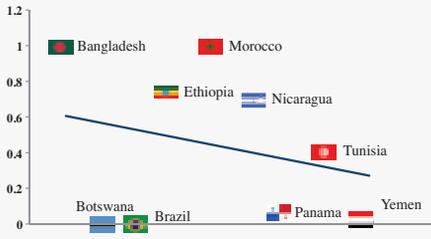
In a bid to diversify sources of financing, venture capital developed rapidly following the establishment of 28 new funds since 2006 compared to 8 funds established over the 2000-2005 period, thus raising the total number of funds established to 36 by the end of 2012. Even though this number is still insufficient, the process set in motion enabled the sector to invest more than 2.8 billion dirhams between 2006 and 2012, for an amount of 8 billion dirhams raised over the same period. With a penetration rate of 0.04%, Morocco is within the average of the MENA region.

2.2.4 Micro-Finance

Micro-finance, which is intended for economic actors excluded from the credit market, is particularly well developed in Morocco and accounts for 40% of Arab world clients (Figure 2.12). After the 2007 micro-finance crisis, the Moroccan Government developed a new legal framework to consolidate the sector.

²⁹ Morocco, Egypt and South Africa were the only African countries included in the MSCI index of emerging markets.

Figure 2.12: Loans per DH 1000 in 2009



Source: Data Market

2.3 Cost of Financing

Moroccan real interest rates had dropped continuously between 2000 and 2007, but the financial crisis shock and the rising default risk have made them rise again to above 5% since 2009.

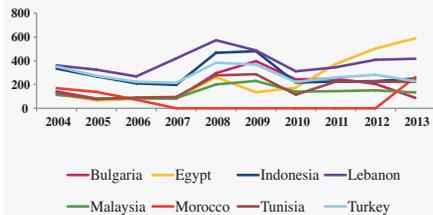
At the same time, significant improvements were made to the operation of the money market. The Moroccan interest rate market has become the most sophisticated in Africa and among the most developed in emerging countries. Since 2011, the Central Bank has published a benchmark yield curve which helps to i) improve money market transparency and ii) serve as a reference to the rapidly developing bond market for both public and private debts.

2.3.1 Cost of Public Sector Financing

The public sector can opt for self-financing through the domestic bond market and or external borrowings on markets or from donors.

The ‘spread’ level of Morocco’s sovereign debt in basis points in relation to American Treasury bills, allows the country to access to financing on the international financial market. Morocco’s sovereign debt spread (250 basis points) is slightly higher than that of Tunisia and identical to that of Indonesia (Figure 2.13). However, it far exceeds the rating the country was able to obtain during the period 2004-2006.

Figure 2.13: Sovereign debt «spread» relative to US Treasury bonds

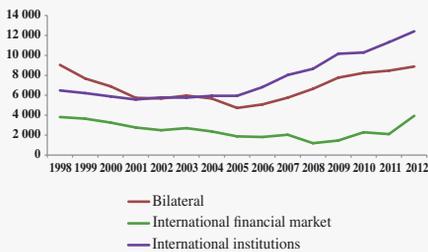


Source: WDI

Since 2005, international financial institutions have become Morocco’s main lenders after the conversion

of bilateral debts into investments (figure 2.14).

Figure 2.14: Morocco's foreign debt stock (in USD millions)



Source: Ministry of the Economy and Finance

The apparent average cost of external debt has remained quite low since 2005 and below the apparent average cost of domestic debt. However, the rate differences must be weighted by the exchange risk, which can be estimated at about 1.5% per year, an indication that interest rate parity is almost confirmed and justifies the choice of debt in domestic currency in the presence of low exchange rate volatility (Table 2.4).

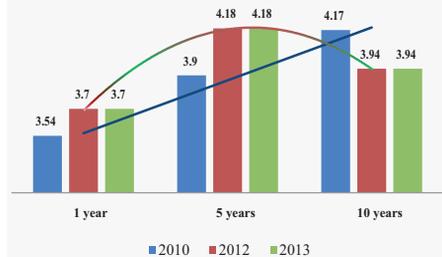
Table 2.4: Average domestic debt/foreign debt cost

	2005	2006	2007	2008	2009	2010	2011
Average cost of domestic debt	6.20%	5.90%	5.80%	5.40%	5.12%	5.25%	4.84%
Average cost of external debt	3.60%	3.60%	3.90%	3.90%	3.60%	3.10%	3.20%

Source: Ministry of the Economy and Finance

The yield curve shows a partial reversal, 10-year rates being lower than 5-year rates in 2012 and 2013 (Figure 2.15). This may reflect two factors: i) decreasing long-term demand for financing or; ii) a reduction in the long-term inflationary risk premium.

Figure 2.15: Yield curve

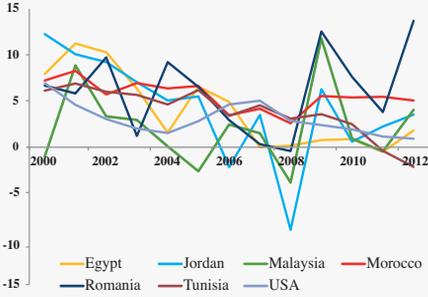


Source: Central Bank

2.3.2 High Cost of Private Sector Financing

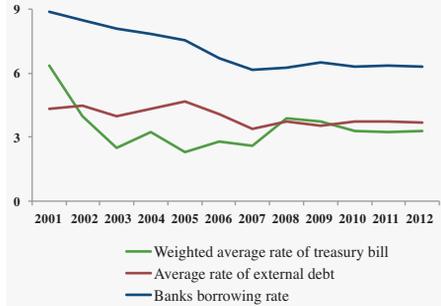
The real lending interest rate has dropped significantly but remains high in relation to the comparator countries (Figure 2.16). After a steady drop in the real lending interest rate between 2000 and 2008, its increase since 2009, due to rising lending rates and falling inflation, places Morocco in an unfavorable position in relation to the comparator countries.

Figure 2.16: Real interest rate in Morocco and comparable countries



Source: Data Market

Figure 2.17: Finance cost/Nominal interest rates

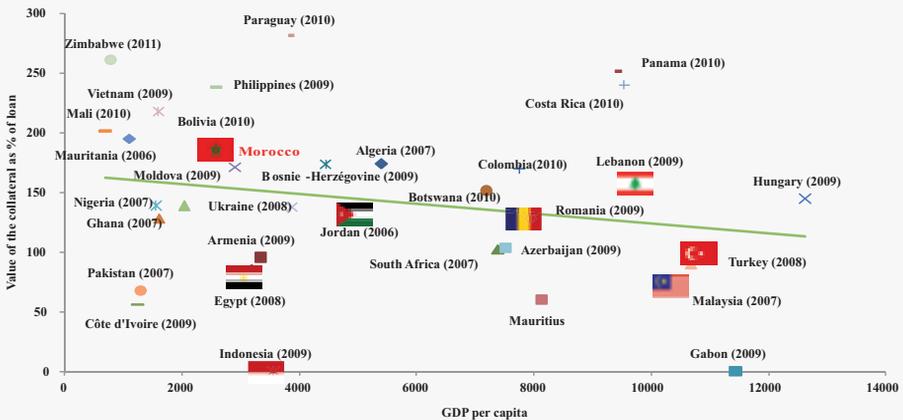


Source: Ministry of the Economy and Finance and Central Bank

The financing cost of private sector investment remains high. Bank lending rates have dropped significantly since 2001 but are still higher than those of the bond market (Figure 2.17).

In addition, the loan guarantee value exceeds that of the comparator countries. According to the World Bank survey (2007), the collateral value accounted for 171% of the loan amount (Figure 2.18).

Figure 2.18: Collateral value



Source: WDI

2.4 Growth Diagnostic Tests

2.4.1 Type 1 Test: Correlation between Real Interest Rate and GDP per capita

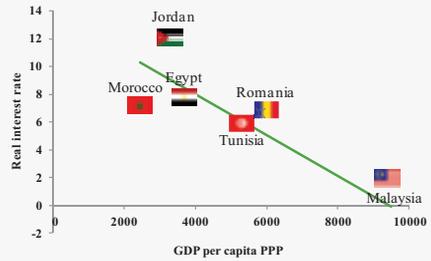
Short-term real interest rates can be controlled by the Central Bank to ensure that, through consumption and investment, real interest rates can have an impact on growth and the GDP per capita level. The effects are not, however, unequivocal and depend on the phase of the business cycle and production capacity utilization rate. Long-term monetary policy is neutral and interest rates are determined by fiscal policy which sets the yield curve on the secondary bond market.

The lack of relationship between the real interest rate and GDP per capita (horizontal IS curve) would indicate that investment is not sensitive to interest rate variation and that, in the overall balance, it is quantitative monetary policy that has an impact through inflation control. Thus, the test measures the impact of interest rates on growth in Morocco and situates the country in relation to comparator countries to answer the following question: are real interest rates too high given the GDP per capita level?

In 2000, Morocco had a comparative advantage over the comparator countries: its real interest rate (7.19%) was relatively

low considering the level of development (Figure 2.19).

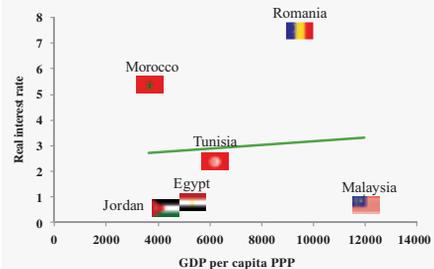
Figure 2.19: Interest rate and GDP/ per capita relationship (2000)



Source: Authors' calculations

On the other hand, in 2010, despite the drop in the real interest rate (5.35%), the Moroccan economy no longer had any advantage over the comparator countries, which sharply reduced their interest rates in order to revive the economic activity (Figure 2.20).

Figure 2.20: Relationship between interest rate and GDP/per capita (2010)



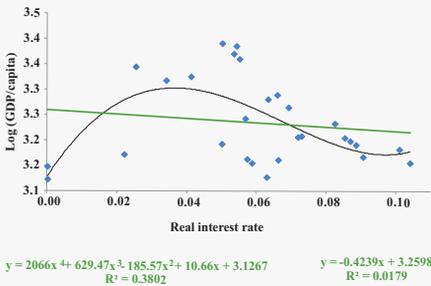
Source: Authors' calculations

From an empirical standpoint, there is no linear relationship between GDP per capita and the real interest rate between 1990 and 2010. Econometric tests on varying variables over a longer period (1980-2012) confirm the lack of linear relationship (Annex 2.2). Consequently, a higher real interest rate than that of the comparator countries would not appear to be an impediment to growth, notwithstanding the threshold effects at the sector and microeconomic levels (Figure 2.21).

(negative correlation). In the latter case, the test conclusion would be the existence of a private sector financing constraint.

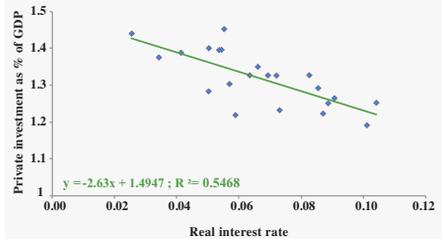
There is a negative relationship between private investment and the real interest rate indicating that there are demand curve shifts following credit supply shocks. This relationship is confirmed by a test on non-stationary variables (Annex 2.3). The assumption of a private investment financing constraint cannot be ruled out (Figure 2.22).

Figure 2.21: Relationship between GDP/per capita and real interest rate (1990-2010)



Source: Authors' calculations

Figure 2.22: Relationship between private investment (in percentage of GDP) – Real interest rate (1990-2012)



Source: Authors' calculations

2.4.2 Type 2 Test: Correlation between the Real Interest Rate and Private Investment

The test seeks to determine whether the relationship is driven by demand shocks (positive correlation) or by supply shocks

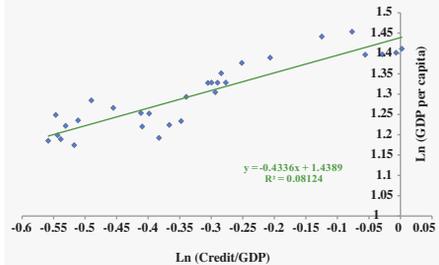
2.4.3 Type 2 Test: Causal Relationship between Bank Credit to the Private Sector and GDP per capita

The objective is to ascertain the existence or absence of a causal relationship between credit and GDP per capita. Even

though studies agree on the theoretical existence of a positive relationship between credit and economic growth, from an empirical standpoint, results obtained by the analysis of interaction between credit development and economic growth are mixed. These results can be explained by the increased share of consumer credit in the total volume of credit allocated to the private sector (Beck et al, 2009) or by the effects of economic cycles (Favara, 2003) and, in certain cases, by strong financial repression and majority control of banking sectors by governments (Ben Naceur & Ghazouani, 2007). This enigma can also be explained by the fact that, in an unsuitable legal and macroeconomic environment, the positive impact of credit on growth can be mitigated by the negative impact of financial instability (Guillaumont & Kpodar, 2004)³⁰. The results of this test should, therefore, be treated with caution.

A simple graphic analysis reveals a common trend between domestic credit provided by the banking sector and GDP per capita. But this, in reality, is a statistical artefact. The Granger test confirms the absence of a causal relationship between the two variables (Figure 2. 23 & Annex 2.4).

Figure 2.23: Domestic credit and GDP/per capita relationship



Source: Authors' calculations

³⁰ Favara G. (2003) ; Beck T., Büyükkarabacak B., Rioja F., & Valev N. (2009) ; Ben Naceur S. & Ghazouani S. (2007) ; Guillaumont J. S. & Kpodar K.R. (2004).

2.4.4 Type 3 & 4 Tests: Bypassing of the Financing Constraint by Firms

The bypassing of the financing constraint by firms, which results in the increased share of self-financed investments, is frequently analyzed in the theory of financial repression³¹. Generally, regulations imposed by the Central Bank as part of banking supervision (Basel Accord) or by the government to promote public debt financing through private savings (bond market), would be the constituent elements of financial repression, since these regulations would have an impact on the volume of credit granted by banks to firms.

However, the relationship between monetary instruments and bank credit is not established for large enterprises, which are not affected by financial repression. Credit demand by small enterprises, which represents a higher

significant risk for banks, is rationed, especially through collateral³².

The test helps to assess, at the macroeconomic level, the role played by self-financing in investment decisions.

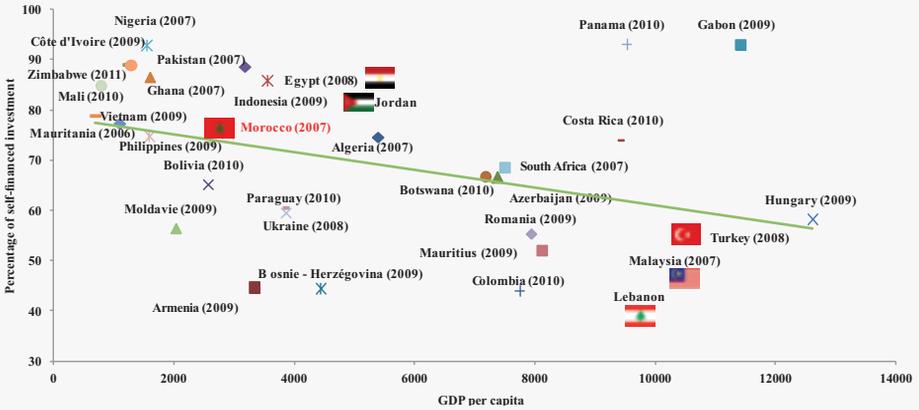
But the impact of financing constraint bypassing and financial repression on economic growth is difficult to establish at the macroeconomic level, especially as, according to many empirical works, bank disintermediation and self-financing tend to be investment and growth accelerators.

The share of self-financed business investments is within the norm for middle-income countries. In all middle-income countries, Morocco has a self-financing rate slightly above the norm, represented by the straight line which, with a few exceptions (Gabon, RSA, Costa Rica), draws the line between LMICs and HMICs (figure 2.24).

³¹ Roubini, Nouriel and Xavier Sala-i-Martin (1994) ; McKinnon, Ronald I (1973) ; Hellmann, T., Murdock, K. and J. Stiglitz (2000) ; Natke, Paul (1999).

³² Anjali Kumar, Manuela Francisco, 2005.

Figure 2.24: Share of self-financed investments



Source: WDI and Authors' calculations

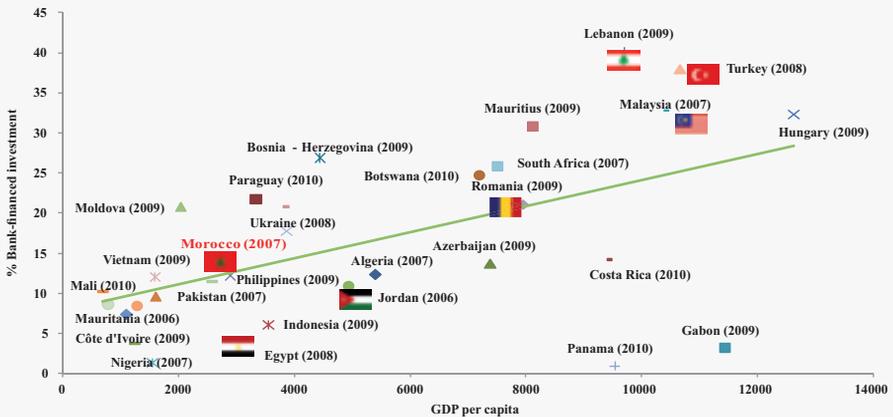
Furthermore, based on recent national accounting data, self-financing in Morocco has witnessed a downtrend since 2010.

As shown by the relationship between the savings of non-financial enterprises and their investment, the self-financing rate of non-financial enterprises fell from 73%

in 2010 to 58% in 2012, representing a 15-point decrease.

In addition, the share of bank credit-financed investments places Morocco within the norm for all middle-income countries (Figure 2.25).

Figure 2.25: Share of bank-financed investments



Source: WDI and Authors' calculations

2.5 Second-Round Effects

The absence of a constraint to access to public sector domestic and foreign finance potentially induces second round effects.

- **Crowding-Out Effect**

Rising public investment and the ensuing deficits can generate a private investment crowding-out effect. It is, therefore, necessary to determine the extent to which banks tend

to prefer bond purchases, at the expense of loan awards to enterprises for investments in the most productive sectors.

- **Price Distortion**

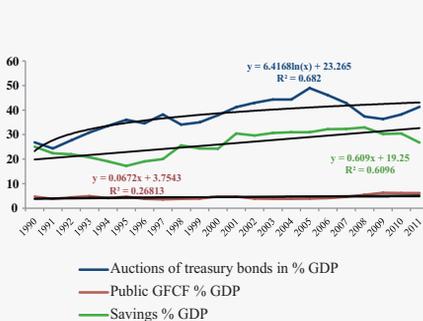
A current account deficit can lead to price distortions between tradable goods (imports and exports) and non-tradable goods (agriculture, services, construction), and thus induce a loss of competitiveness (increase in the internal real exchange rate)³³.

³³ The price relationship between non-tradable goods and tradable goods.

2.5.1 Crowding-Out Effects

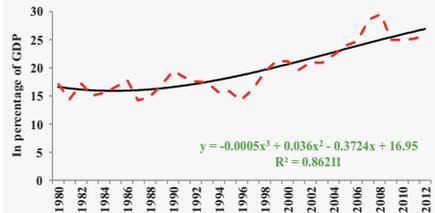
External public debt has risen since 2007, because of the widening current account deficit from 19.8% to 25.7% of GDP in 2012. Between 1990 and 2006, Treasury bond issues, which account for 98% of the domestic financing of public debt, absorbed an increasing share of national savings (Figure 2.26). However, private sector investment continued to grow as a result of abundant liquidity, due especially to privatization, tourism revenue, migrant remittances and foreign direct investments. Dwindling liquidity, owing to the international crisis, combined with the completion of the privatization process, is likely to create a crowding-out effect if budget deficits remain high (Figure 2.27).

Figure 2.26: Domestic debt financing and national savings



Source: Ministry of the economy and finance and Authors' calculations

Figure 2.27: Gross fixed capital formation, private sector in percentage of GDP

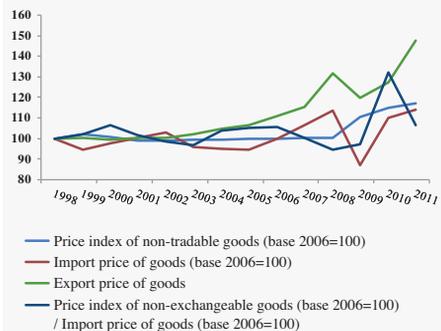


Source: WDI and authors

2.5.2 Price Distortions

The price relationship between non-tradable goods and tradable goods (internal real exchange rate) was relatively stable up to 2009, indicating the absence of price distortion linked to the current payment deficit (figure 2.28).

Figure 2.28: Relationship between non-traded goods and traded goods



Source: HCP and Authors' calculations

Access to external financing does not lead to an increase in the internal real exchange rate because of the combined effects of inflation control by the Central Bank and

the subsidy policy. However, reform of the compensation system could lead to a drop in the prices of non-tradable goods and an improvement in the real exchange rate.



Chapter 3

Human Capital



Chapter 3: Human Capital

Key Messages

- The lack of human capital, a very important factor of production for long-term growth, is a major challenge to private investment.
- Morocco is in a demographic transition phase following improved life expectancy and declining mortality and fertility rates. This phase is characterized by a transformation of the population structure by ages (drop in dependence ratio) and the highly significant phenomenon of urbanization.
- The national health policy, established by the Moroccan Government for some years now, has helped to improve the population's health status (longer life expectancy, lower fertility and mortality rates, reduction in communicable diseases etc...).
- Currently, the Moroccan population's health situation is not a major obstacle to private investment. However, the examination of various health indicators by region reveals significant inequalities in terms of quality and access to various health services.
- Morocco has invested greatly in education in recent years. However, returns on these investments and the literacy rate remain low in relation to the comparator countries. The education system is marked by inequalities between men and women and between urban and rural areas: 36.7% of the total population aged 10 years and above is illiterate, including 51.2% of rural dwellers and 64.7% of rural women.
- Morocco has made great strides in terms of primary school enrolment (a 97% rate in 2012). On the other hand, enrolment rates in secondary and higher education remain very low and disparate, reflecting a very wide gap and a very low average schooling period.
- Vocational training, which has contributed to the employment of more than 64% of its graduates, has been an important component of the Moroccan educational system for some years now.
- Results of international assessment tests have revealed that Morocco's student scores are relatively low, which is the result of the failure to acquire the necessary elementary skills to pursue their education.
- Morocco's educational efficiency and performance in terms of education and training are very low. This has limited any growth in the availability of trained (having taken a

vocational training course) and skilled (having obtained higher education diplomas) labor. At the same time, Morocco has recorded a very high rate of emigration of higher education graduates (in relation to the comparator countries).

- The low internal and external efficiency level of the education and training system has a negative impact on human capital accumulation in Morocco. This weakness is explained by lack of coordination among the system's actors (institutional, private, civil society), the instability of applied programs and policies, the plethora and heterogeneity of institutional stakeholders and the absence of systematic monitoring-evaluation of all programs.
- Educational system reform has become a priority and investment in vocational secondary education would be a necessary condition for the promotion of sustainable growth.
- In addition to the inadequacy of skilled human capital, the mismatch between training provided by the education and training system and the needs of enterprises is one of the factors impacting negatively on economic growth and the employability of young graduates.
- The test results reveal a complex situation and seem to indicate that a major constraint to growth concerns the training of secondary and vocational training graduates, which remain inadequate despite the efforts made.

Introduction

Human capital, which covers all the skills, talents, qualifications and experience accumulated, is a highly important factor for long-term growth³⁴. Education and training are at the core of the human capital development process.

Improvement of the level of education and skills helps to build firms' capacity to create, assimilate and use new technologies that will ultimately help to enhance productivity. In addition, health conditions can have a significant impact on economic efficiency, particularly in developing countries. Consequently, in addition to its direct role as a factor of production, human capital development in its health and demographic dimensions complements other factors such as physical capital and natural resources.

Lack of human capital can, therefore, represent a major challenge to growth and impede private investment, either from a quantitative standpoint (with an inadequate number of persons in a fit state to work or having received specific training),

or from a qualitative standpoint (given the inadequate quality of training received).

This chapter will confirm that the lack of skilled human capital is an impediment to private investment in Morocco. According to Moroccan firms, the lack of adequately skilled labor is a major obstacle to the development of their activities. The two other dimensions, namely demographic trends and health, do not seem to be constraints to growth.

Low returns to education in Morocco³⁵ ***explain the low level of human capital development and, consequently, the low levels of economic growth.*** The analysis highlights the importance of continuing the efforts to generalize access to the educational system and improve its efficiency in order to capitalize on trade openness and foreign direct investments. Economic reforms cannot, on their own, have a positive impact on the country's development in the absence of a real and structural reform of the education and training systems. It is also necessary to ensure coordination among the different parties (public and private sector) to establish adequate educational policies and strategies.

³⁴ Gary S. Becker (1964, 1993). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. University of Chicago Press.

³⁵ Low education performance both from in term of quantity (lateness in the generalization of access to the system) and of quality (retention rate, success rate, match between training and the labour needs of the national economy, etc.).

3.1 Demographic Context

As a result of longer life expectancy and the drop in mortality and fertility rates, Morocco is currently in a demographic transition phase. It has moved from a situation of high fertility and mortality rates to one where these rates are fairly low.

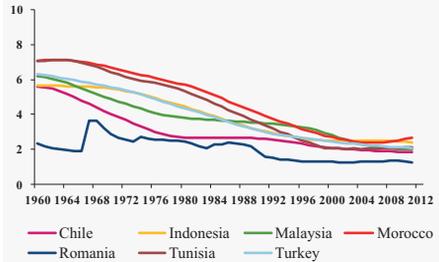
As life expectancy increased from 48 years in 1960 to 73.7 years in 2013 (Table 3.1), the fertility rate fell from 7.2 children per woman in 1962 to 2.2 children in 2012, a rate slightly higher than the generation replacement level (2.05 children per woman)³⁶ (Figure 3.1) and the infant mortality rate dropped between 1960 and 2011 from 239‰ to 28.8‰. This progress is linked to the improvement of health services but falls short of that observed in the comparator countries.

Table 3.1: Trend of life expectancy by gender and by area (1980-2012)

	Urban area			Rural area		
	Total	Men	Women	Total	Men	Women
1990	64	63	65	65.5	55.4	57.6
2000	72.9	70.8	75.1	66.8	65.9	67.8
2007	75.7	73.7	77.7	67	67	68
2010	76.2	74.2	78.3	1.7	70.6	73
2013	76.6	74.6	78.7			

Source: HCP

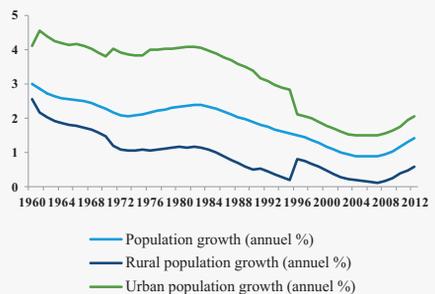
Figure 3.1: Trend of the fertility rate in Morocco and comparable countries (1960-2012)



Source: Ministry of Health, Morocco & Development Indicators, World Bank

Due to this demographic transition, population growth slowed down during the last decade: while the population grew by an average of 2.1% per year between 1960 and 2000, its growth rate fell to 1% between 2001 and 2012 (figure 3.2).

Figure 3.2: Trend of population growth rate (1960-2012)



Source: HCP, Morocco

³⁶ These trends were encouraged by a wide range of socio-economic factors, especially a later marriage age, longer schooling for women, better survival rates for newborns and children of lower age and increasing urbanization.

The demographic transition resulted in the transformation of the country's population structure by age. Thus, the proportion of the working age population (aged 15 to 64 years) in the total population rose from 52.3% in 1960 to 67.2% in 2012 (Table 3.2). The experience of East Asian high growth economies shows that such a rise can give a significant impetus to growth, if the economy also generates adequate labor demand (Bloom, Canning & Malaney, 2000)³⁷.

Table 3.2: Trend of the population structure (1960 - 2013)

	Population aged 0 to 14 years (% of total)	Population aged 15 to 64 years (% of total)	Population aged 65 and above (% of total)
2000	44.71	52.31	2.98
2007	44.02	52.94	3.04
2010	34.05	61.27	4.68
2013	27.85	67.17	4.98

Source: HCP

Furthermore, the demographic transition resulted in a drop in the dependence ratio³⁸. In Morocco, this ratio fell from 107% in 1960 to 55% in 2013. This drop confirms that Morocco is currently going through a demographic transition phase and that economic growth will be promoted if the demographic dividend is properly exploited³⁹.

Thus, as emphasized by Zhang & al. (2005)⁴⁰, individuals whose time horizon is extending do change behavior: they have fewer children, invest more in education, save and invest more. At the macroeconomic level, the country's growth prospects are improving.

Normally, this dividend results in increased income per capita and then in higher and more dynamic investment as a result of the savings of a larger active population⁴¹. The existence of a demographic dividend provides an opportunity and not a guarantee for higher living standards.

The case of Asian countries could serve as an example for Morocco (South Korea, Taiwan, Hong Kong and Singapore). Appropriate savings and employment policies will be necessary to take advantage of this opportunity.

The demographic transition in Morocco was also accompanied by considerable urbanization. The share of the urban population in the total population rose from 29.2% in 1960 to 59.2% in 2013. Projections made by the Centre for Demographic Studies and Research (CERED) show that

³⁷ Bloom, D, Canning, D & Malaney, P (2000).

³⁸ The demographic dependency ratio is defined as the relationship between the population under 15 and over 65 relative to those aged 15 to 64. It helps to measure the burden on the active workforce.

³⁹ Provided that investments prioritize human capital development and the well-being of the working age population.

⁴⁰ Zhang & Zhang, 2005; Aghion, P, Howitt, P & Murtin, F (2010).

⁴¹ J.C (2007).

the urbanization rate will be 69% in 2050. This situation might create problems in the long run, if adequate policies and strategies are not implemented (pressure on land, unemployment, etc.).

Beyond the demographic dividend, increased life expectancy, which occurs during the demographic transition, plays a decisive role. The school age population fell slightly during the 2009–2014 period following a reduction in the number of children by almost 350 000 between 2009 and 2014, distributed among the three age groups (Table 3.3). This creates less demographic pressure on the educational system.

Table 3.3: Trend school-age population by age group, in thousand

		2004	2014	2030
6-11 years	Boys	1913	1752	1626
	Girls	1847	1675	1570
	Total	3760	3427	3196
12-14 years	Boys	1005	897	834
	Girls	975	864	809
	Total	1980	1761	1643
15-17 years	Boys	956	912	846
	Girls	954	882	818
	Total	1910	1794	1664

Source: HCP

3.2 Health Environment

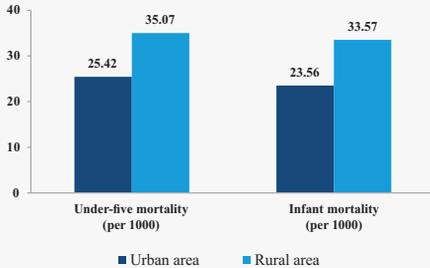
Health remains a major pillar of a country's economic and social development. Indeed, a population's poor health conditions might reduce its efficiency and productivity.

The Moroccan Government has, for some years now, established a proactive policy to improve its population's health situation. This strategy aims to ensure equity in care provision among regions and between urban and rural areas, facilitate its access for the poorest and make the health system credible by improving its responsiveness and by reducing the cost of healthcare and drugs. It also seeks to reduce the share borne by households in health financing to less than 25% by the year 2015 and to totally take charge of long-term illnesses.

The health policy implemented has led to a marked improvement in Morocco's health indicators. Indeed, the under-five mortality rate fell sharply between 1987 and 2011 from 76‰ to 30.5‰. The same downward trend was observed for infant mortality over the same period (from 57.4‰ to 28.8‰). This trend results from progress made in the control of morbidity specific to this age group, either through the immunization program (almost 94% of children received all their mandatory vaccinations in 2009), or the diarrheal diseases and acute respiratory infections control program.

However, despite the efforts made, wide disparities remain between areas. Infant and under-five mortality rates remain high in rural compared to urban areas (Figure 3.3).

Figure 3.3: Child mortality rate in Morocco, by area



Source: Ministry of Health, Morocco

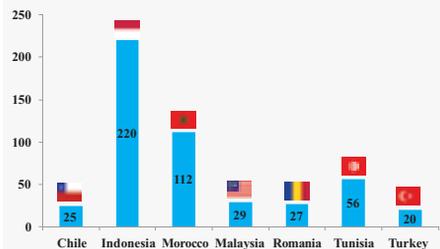
These disparities are explained by i) the socio-economic deficit experienced by rural disadvantaged areas, ii) cultural considerations and iii) inadequacies of the health system in these areas. Areas like Tangier-Tetouan or Marrakesh and Fez still have a shortage of doctors (both in the public and private sector) in relation to their population size.

Despite the efforts made in this area, levels of infant mortality in Morocco remain high in relation to most countries of the MENA region and reference countries. Currently, the infant and child mortality rate (under-five) in Morocco is 30.5%, a rate significantly higher than those of the comparator countries (only Indonesia has a comparable rate).

Regional disparities are also observed at the level of other health indicators such as maternal mortality. Indeed, despite a sharp drop during the last twenty years, mortality rates in rural areas remain high (the maternal mortality ratio in rural areas is double that in urban areas: 148 compared to 73 deaths per 100 000 live births in 2011)⁴² (Figure 3.4). This is due to a lack of antenatal care and the low proportion of deliveries in a supervised environment. The situation is compounded by inadequate hospital capacity, which has not increased at the same rate as that of the population.

Morocco is expected to intensify its efforts to achieve the Millennium Development Goal in 2015, i.e. 83 deaths per 100 000 live births.

Figure 3.4: Maternal mortality rate (per 100 000 live births) in Morocco and comparable countries (2011-2012)

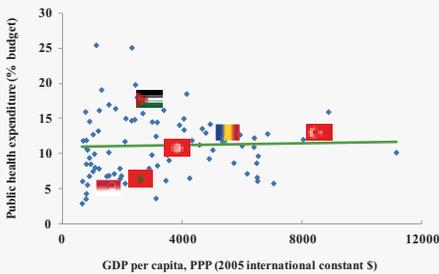


Source: Ministry of Health, Morocco & Development Indicators, World Bank

⁴² Ministry of Health, Kingdom of Morocco, "2012- 2016 Plan of action to accelerate the reduction of maternal and neonatal mortality, End of the 2015 countdown", with the support of UNICEF & UNFPA.

As concerns financing, efforts were made to improve health services and increase access to these services in disadvantaged regions. In this regard, health expenditure has increased since 2005, from 5.1% of the general government budget to 6.3% in 2013. The strategy adopted seeks to increase investment in disadvantaged regions. However, the budget allocated to the Ministry of Health remains below the international standard set by the World Health Organization at 10% (Figure 3.5).

Figure 3.5: Public health expenditure relative to GDP per capita (2012)



Source: Ministry of Health, Morocco & Development Indicators, World Bank

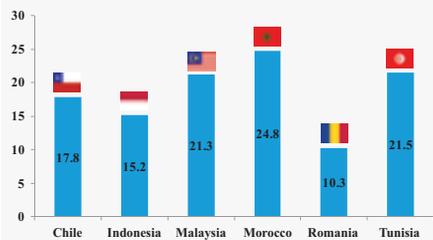
It can be reasonably concluded that the Moroccan population's health level is not a major obstacle to private sector development. However, the examination of various indicators by region reveals significant inequalities in terms of quality and access to various health services. The acceleration of ongoing reforms is necessary to close the gap in access to the different health services.

3.3 Education and Training

The acquisition of skills helps to improve the competitiveness of enterprises (in terms of enhanced productivity). Morocco has, therefore invested greatly in education in recent years. This commitment was realized both through educational financing (with an increase in the share of the budget allocated to educational expenditure at all levels) and from the standpoint of public policies supporting this financing (establishment of an Emergency Plan launched in 2009 to speed up the achievement of the objectives of the National Education and Training Charter (CNEF)).

The most recent available data on the share of public expenditure allocated to education show that Morocco exceeds all the comparator countries, with a share of 24.8% of the general government budget (Figure 3.6).

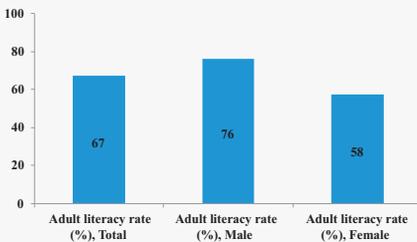
Figure 3.6: Public educational expenditure, total (percentage of the State budget)



Source: HCP, Morocco & Development Indicators, World Bank

However, the results of these investments remain low. Indeed, the efforts made have undoubtedly helped to improve education levels, but a wide gap remains to be closed. Indeed, the literacy rate remains relatively low in relation to the comparator countries, which have rates above 90%. In addition, there are literacy inequalities between men and women and by area: in 2012, illiteracy affected 36.7% of the total population aged 10 years and above, 51.2% of rural dwellers and 64.7% of rural women (figure 3.7). The overall rate is very high compared to the reference countries.

Figure 3.7: Literacy rate (percentage of person aged 15 years and above), Morocco 2011



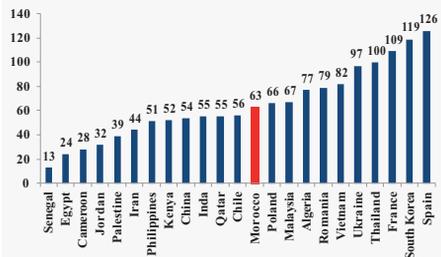
Source: HCP

3.3.1 Enrolment Rate

Over the period 2007-2012, the specific enrolment rate increased only marginally from 59% in 2007-2008 to 63.5% in 2012-2013. In rural areas, the situation is more worrisome, despite a slight improvement of this rate from 42% to 45.5% for the same period.

International comparison in terms of the gross pre-schooling rate (figure 3.8) shows that Morocco is well placed compared to Arab countries and even to countries with similar economies.

Figure 3.8: Gross enrollment rate in pre-primary education by country in 2010

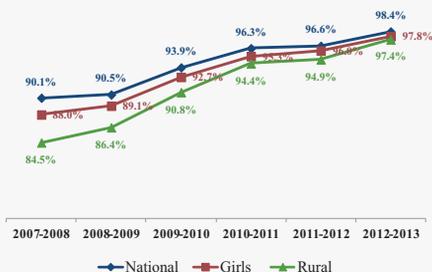


Source: Collection of world data on education 2012, ISU

This observation should be qualified due to the fact that Moroccan pre-schooling is predominantly traditional and that the age group targeted by other countries may range from 3 to 6 years.

Primary education enrolment rates rose significantly between 2008 and 2012 and universal enrolment has almost been achieved (figure 3.9). Morocco has made great strides in primary education and the primary net enrolment rate rose from 90.1% in 2007-2008 to 99.6% in 2012-2013. In rural areas, it rose from 84.5% in 2007-08 to 97.9% in 2012-13. As concerns girls' education, the net enrollment rate rose from 88% in 2007-2008 to 99.1% in 2012-2013.

Figure 3.9: Trend of the net primary school enrollment rate



Source: Ministry of National Education, Morocco

The performance of primary education in Morocco is satisfactory. Indeed,

repetition and drop-out rates are very low, representing respectively 8% and 3% in 2012. The completion rate is high at about 86% (Table 3.4).

On the other hand, the secondary education enrolment rate is very low and disparate. At the junior secondary level, the net enrollment rate for children between 12 and 14 years does not exceed 53.9% at the national level, with significant differences between areas and by gender (among girls in rural areas, this rate is 23.6% compared to 78.7% among city dwellers).

Table 3.4: Internal primary and secondary education efficiency

		2008-2009	2009-2010	2010-2011	2011-2012
Primary	Average repetition rate	12.3	12	9.3	8.2
	Average dropout rate	4.6	3.3	3.1	3.2
	Completion rate	76	83	86.5	86.2
College	Average repetition rate	15.2	16.1	16.3	16
	Average dropout rate	13.1	12.9	10.8	10.4
	Completion rate	52	57	64.6	65.3
Skills	Average repetition rate	19.2	18.8	18.1	17.1
	Average dropout rate	14.1	11.9	9.2	11
	Completion rate	26	30	36.2	37.5

Source: Ministry of National Education, Morocco

At the vocational secondary level, the net enrolment rate rose from 19.1% in 2007-2008 to 31.7% in 2012-2013, representing an almost 12-point increase. However, this rate's distribution by area is highly biased

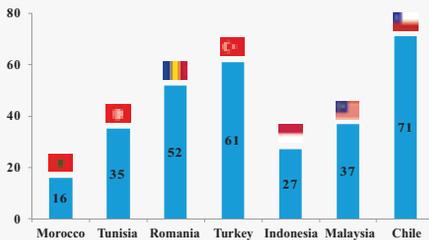
towards urban areas. According to gender, the net enrolment for girls rose from 20.6% in 2007-2008 to 34.2% in 2012-2013, representing a 14-point improvement. Despite this positive trend, enrollment rates remain low.

The lack of school, road and transport infrastructure in certain regions makes school access very difficult.

In addition, secondary education quality (junior secondary and vocational) is very low in Morocco. Completion rates in these two cycles (65% and 37.5%) confirm this observation.

In parallel, enrolment rates at the tertiary level are very low and lag behind significantly in this area. Morocco has the lowest rate (16%) among the comparator countries. Late enrolment in higher education is partly attributable to the fact that Morocco has a very low completion rate for secondary studies and access to secondary education is far from universal. Further efforts are required to close this gap (Figure 3.10).

Figure 3.10: Higher education enrollment rate (2011-2012)



Source: Ministry of National Education, Morocco & Development Indicators, World Bank

3.3.2 Length of Schooling

The length of schooling was extremely short in 1960 below 6 months (0.4 years).

Over the next fifty years, the average years of schooling of the population aged 15 years and above gradually rose to 5 years in 2010. However, this recorded level is below that of the comparator countries and the other Arab countries (5.7 years) and falls far short of the expected length of schooling (see Table 3.5).

Table 3.5: Average schooling duration by country (2010)

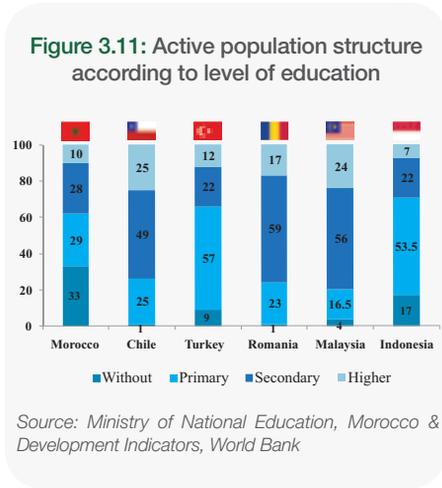
	Average schooling duration	Expected schooling duration
Morocco	5.0	10.5
Algeria	7.6	12.8
Tunisia	7.3	14.5
Egypt	7.0	11
Libya	8.3	16.5
France	10.5	16.1
Spain	10.4	16.4
USA	13.1	15.7
Arab States	5.7	10.8
OECD	11.4	15.9

Source: Barro and Lee, 2010 & OECD

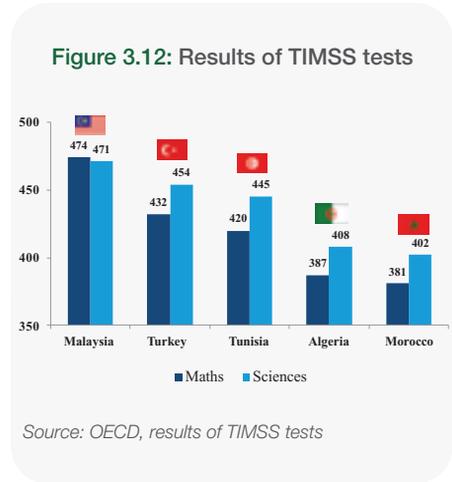
Consequently, the internal inefficiency of the educational system has resulted in low stocks of general and specific skills.

One-third of Morocco's active population does not have any education (33%) or have only a primary education level (29%) (Figure

3.11). The level of education in the active population reflects the very low level of development of the educational sector in Morocco (Figure 3.11).



lack of skills is a major constraint to economic growth. Results show that Morocco had the lowest scores in TIMSS tests in 2007 among the comparator countries (figure 3.12).



3.3.3 Education Quality

The international assessment tests for pupils/students⁴³, can be used to assess a country's education quality. The results for Morocco are relatively low. TIMSS or PIRLS results and performance analyses of the Moroccan educational system display serious shortcomings in its performance. Cognitive performances are generally correlated with income levels at the international level. Therefore, it is also relevant to compare the performances of Moroccan students to those of groups of similar countries, in order to determine if the

The correlation between results obtained in international tests and national income is close and significant. This relationship is confirmed in the case of Morocco. Indeed, Morocco's low scores are partly explained by its low income level. The proportion of Moroccan students with high cognitive skill levels is very low, particularly in mathematics and sciences. Hanushek and Woessmann⁴⁴ identify this group as particularly important for a country's long-term growth. Only 0.1% of Moroccan students fall within this limited category, a fairly low proportion compared to that

⁴³ These tests include the PISA (Program for International Monitoring Assessment), TIMSS (Trends in International Mathematics and Science Study) or the Progress in International Reading Literacy Study (PIRLS).

⁴⁴ Hanushek, E & Ludger, W (2012).

recorded in Tunisia (0.3%), Turkey (3.9%), Romania (4.6%) and Malaysia (6.5%).

Generally, the mediocre performance of Moroccans in international tests suggests that they have not acquired the elementary skills necessary to pursue their education. It also raises concerns regarding the economic and social benefits of higher education (for which fees are fully covered by the Government).

3.3.4 Vocational Training in Morocco

Vocational training has been an important component of the Moroccan educational system for several years now. It contributes to the development of various sectors of economic activity by making skilled labor available to them. Thus, the supply of vocational training increased by 8% per year between 2001 and 2010.

Having long been considered as a means of absorbing failing students in Morocco, vocational training now enjoys a higher status and has led to the integration of more than 64% of its graduates into the labor market since 2000. Unlike university graduates, those completing vocational training are monitored and are often more successful in integrating professional life, through various youth employment support programs established by the Government (Idmaj (Insertion), Taehil (qualification) and

Moukawalati (business creation support program).

Faced with the difficulties of integrating higher education graduates into professional life, vocational training could provide a solution for Moroccan youths. The relatively high integration rate shows that vocational training meets the needs of private investors fairly well, at least in some sectors (80% integration rate in the construction sector, more than 70% of graduates of the Tetouan/Tangier region). Of course, the integration rate does not provide information about the sustainability and decent nature of the employment of vocational training beneficiaries. Only regular monitoring surveys of graduates some years after their integration can address this concern. Such tracer studies are still at the planning stage.

3.4 Growth Diagnostic Tests

3.4.1 Type 1 Test: Education and Training Performance

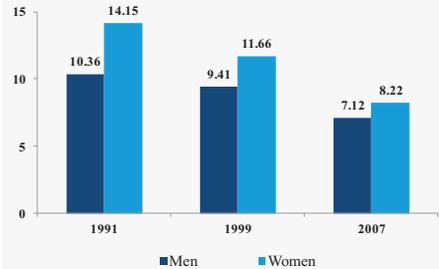
The return on investment in education and training is measured by estimating the wage increase associated with the number of years of education and training or seniority in the profession. Thus, a high educational wage premium that increases over time reveals strong demand for skilled labor. Conversely, a low wage premium

associated with education and training indicates excess supply of graduates relative to demand or signifies that the quality of training received by graduates is inadequate.

In practice, this premium is obtained by estimating the “Mincer” equation, which links the wage level to the number of years of study and by taking into account professional experience, as well as individual specific characteristics (age, sex, region, etc.). However, the interpretation of this test must be nuanced depending on the sectors of activity and geographical zones.

The HCP study on “Gender Wage Differentials, 1991-2007” shows that returns to education⁴⁵ and training efficiency rates in Morocco are not very high (Figure 3.13), especially in comparison with other countries like Chile (20%) and Brazil (15%). Women’s returns to education are higher than men’s. Returns to education have also decreased over time. Considering the scarcity of graduates, this result relates back to the problem of education quality in Morocco.

Figure 3.13: Educational and training efficiency in Morocco (in percentage)



Source: Doudich, M “Men-women wage inequalities 1991-2007”, HCP, 2011

3.4.2 Type 2 Test: Correlation between Level of Education and GDP per capita

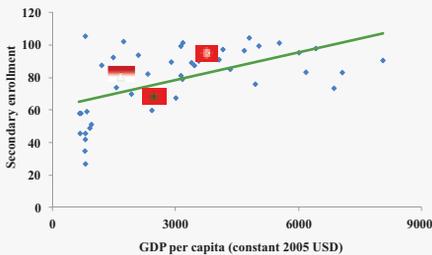
The correlation between secondary education rates, often used to measure the educational system’s efficiency, and GDP per capita makes it possible to determine if the enrollment level in Morocco corresponds closely to its GDP per capita. Many works (E. Glaeser & J. Shapiro, 2001) have shown that there is

⁴⁵ Returns to education are obtained by estimating the Mincer equation that links wage levels to the number of years of schooling, taking into account professional experience and a series of individual characteristics (age, gender, region...). A high return to education and / or one increases over time indicates a shortage of skilled labour.

a positive correlation between the average length of schooling and income per capita and that high education levels lead to increased GDP per capita. An educational level lower than that expected for a given GDP seems to indicate that further efforts are required in terms of education, either to safeguard competitiveness and living standards or to improve GDP.

Enrolment rates in Morocco are lower than those of countries with the same income level. The correlation between secondary education rates (often used to measure the educational system's efficiency) and GDP per capita shows that Morocco is a country whose enrolment rates are significantly lower than they ought to be, given their GDP per capita (Figure 3.14).

Figure 3.14: Correlation between the secondary enrollment rate and GDP per capita



Source: HCP data, Morocco & Development Indicators, World Bank

This indicates a problem of education and training quality, confirmed by the 2013 ranking in the World Economic Forum's Global Competitiveness Report (Annex 3.1).

3.4.3 Type 3 Test: Bypassing the Constraint

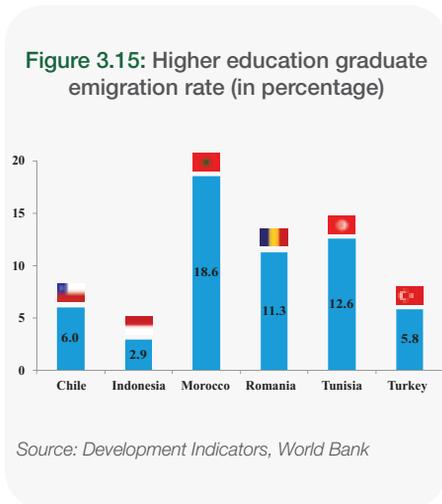
This test is analyzed from the standpoints of both the firm and graduates.

This test first seeks to determine how firms overcome the lack of skilled labor. Generally, enterprises turn towards continuing training to address this problem. The widespread use of this type of training indicates the existence of either a quantitative or qualitative problem in education or training since new entrants do not have the level or adequate training to meet private sector needs.

Second, from the standpoint of job applicants, the test helps to determine whether skilled labor can successfully overcome the obstacles imposed by insufficient demand for skilled labor. Thus, faced with insufficient employment supply for higher education graduates, graduate immigration rates will be very high. This test shows that at the higher education level, the problem is on the demand rather than the supply side.

- **Immigration**

Morocco has the highest higher education graduate emigration rate in relation to the comparator countries (Figure 3.15). However, this rate may be considered normal if the overall emigration rate is also high (compared to other countries).



Indeed, human capital in Morocco is characterized by a high graduate

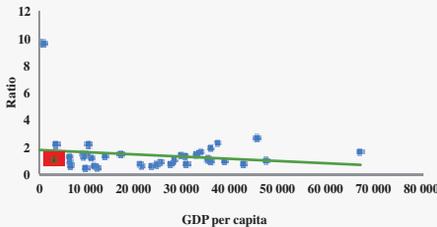
unemployment rate. This situation can be explained, either by the poor quality of the educational system, or by a surplus of graduates in relation to the absorptive capacity of the national economy.

To verify these assumptions, the 2005 data on immigration in several countries were used to build a ratio of the higher education graduate emigration rate to the overall emigration rate. The comparison of this ratio between Morocco and countries with similar income per capita helps to determine whether the emigration rate of higher education graduates is relatively high⁴⁶.

Figure 3.16 shows that the trend in Morocco is almost identical to those of countries with similar economies, which indicates that constraints linked to “low education quality” and “low demand for skilled workers” generally have the same weight in explaining higher education graduate emigration in 2005.

⁴⁶ A ratio above the trend indicates a surplus of graduates and confirms the assumption that constraints behind low demand for graduates are major challenges. On the other hand, a ratio below the trend confirms that low education quality is a major challenge.

Figure 3.16: Ratio of the higher education graduate emigration rate to the total emigration rate relative to GDP per capita (2005)



Source: Data on immigrants in OECD countries and non-OECD countries and Development Indicators, 2005

- **Human Capital Training by Firms**

In Morocco, large enterprises consider lack of skilled labor as a major challenge to their activities. According to the survey conducted on the business climate, 38% of large Moroccan enterprises identify the lack of adequately skilled labor as a major constraint. They overcome this challenge by using in-service or continuing training. Small and medium-sized enterprises employ more unskilled labor or workers with vocational training certificates. Consequently, even though the educational quality in Morocco is not high, SMEs manage to bypass this constraint by finding human resources with the skills and training that they are seeking.

3.4.4 Type 4 Test: Camels & Hippos

The objective of this test is to identify the type of firms which are able to

develop despite the skilled labor shortage. Lack of skilled and trained staff in a given sector or region will urge most firms to engage in activities which do not require this type of staff (camel enterprises). On the contrary, abundant skilled labor supply will not pose any problem to the establishment of enterprises producing technology- and knowledge-intensive goods (hippo enterprises).

The analysis of unemployment rates by level of education also helps to identify, from the standpoint of employment demand, what type of workforce succeeds in finding a job. In the case of a mismatch between labor supply and demand for highly qualified jobs, graduate unemployment rates will be highest, thus reflecting the difficulty in finding a job to match their skills.

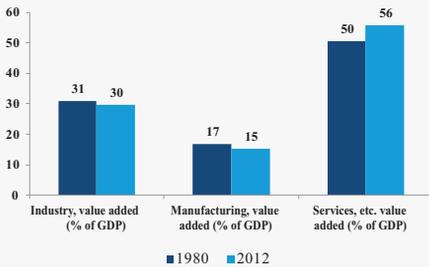
- **For the Enterprise**

If labor quality represented a major constraint to the development of the enterprise's activities, firms operating in high-tech and innovation-oriented sectors would find it more difficult to thrive. In the case of Morocco, this observation is confirmed. Indeed, as illustrated in Figure 3.17, only the share of value added in GDP of the services sector rose between 1980 and 2012 from 50% to 56%. This sector is less demanding in terms of skilled labor. As for the manufacturing sector, the share of

its value-added in GDP fell from 17% to 15% over the same period. Highly sensitive to labor quality, this sector faces difficulties in thriving.

In Morocco, this problem of manufacturing sector sensitivity in relation to labor quality and skills also appears at the level of labor structure and trends by sector.

Figure 3.17: Comparison of value added (percentage of GDP) by sector in Morocco 1980 and 2012



Source: Development Indicators, World Bank

- **For the workforce**

The unemployment structure reveals a lack in demand for skills and graduate labor. As illustrated in Table 3.6, the unemployment rate for workers having completed secondary and higher education studies is considerably higher than for those who did not pursue an education. Firms employ more low educated labor than graduate labor.

Table 3.6: Unemployment level according to diplomas and areas of residence (in percentage)

Diploma	Urban	Rural	National
Without a diploma	6.9	2.3	4
With a diploma	18.2	10.6	16.4
* Average level	17.9	9.5	15.3
Fundamental education diplomas and certificates	17.1	8.8	14.3
Vocational qualification diplomas	20.2	13.4	21
Vocational specialization certificates	21.9	33.7	22
* Higher level	18.6	20.1	18.7
Certificates issued by higher education schools and institutes (including the faculty of medicine)	5.3	16.2	5.4
Certificates issued by faculties	21.9	33.7	22.7
Secondary education certificate	20.2	13.4	19.2
Technicians and middle management certificate	19.5	17.7	19.4
Advanced technicians certificate	21.2	0	20.9

Source: National Employment Survey, HCP 2012

3.5 Second-Round Effects

The problem of a mismatch between labor supply and demand is extremely challenging, mainly for major enterprises.

As soon as this constraint is overcome, the performance of Moroccan enterprises will certainly be improved.

However, in overcoming this constraint, other macroeconomic issues and risks may emerge and impede private investment development, if appropriate policies are not implemented. Thus, by improving higher education enrolment rates, the problem of youth unemployment could worsen in Morocco, especially as the working age

population between 15 and 34 years will average 33% by 2030 (Table 3.7).

Table 3.7: Moroccan population projection by age group

	2013	2020	2025	2030
0 - 4 years	8.7	7.8	7.3	6.7
5 - 9 years	8.7	7.9	7.4	7.0
10 - 14 years	8.9	8.1	7.6	7.2
15 - 24 years	19.1	16.6	15.5	14.8
25 - 34 years	17.3	17.3	16.3	14.9
35 - 44 years	13.2	14.6	15.4	15.6
45 - 54 years	10.9	11.1	12.0	12.3
55 - 64 years	7.4	9.1	9.4	9.8
65 years and above	5.9	7.4	9.0	10.8

Source: HCP, CERED retro-projections 2006

The easing of this constraint could have effects on wages and factor mobility.

Currently, wages are not elastic in relation to the educational attainment. This is explained

by the scarcity of skilled labor which exactly meets a firm's needs. However, when this issue of scarcity has been addressed, labor market wage rigidity might increase.



Chapter 4

Infrastructure



Chapter 4: Infrastructure

Key Messages

- Infrastructure in Morocco is a key factor in the country's development process. It has been significantly improved both in terms of quantity and quality.
- Nevertheless, wide regional disparities remain between the North and South, and the East and West. These disparities are predominant in transport infrastructure and in access to water and sanitation facilities.
- The electricity distribution network has been greatly expanded in urban and mainly rural areas. However, connection costs remain high. Electricity prices for enterprises have increased in recent years because of the Government's decision to pass on part of the difference between electricity generation and/or acquisition cost and its selling price.
- Morocco is fairly well positioned in terms of infrastructure. Current infrastructure demand is satisfied and cost does not seem to be a constraint. The level of infrastructure is not, therefore, a fundamental constraint to growth in Morocco.

Introduction

Infrastructure is a key factor in a country's development process. It is a determinant of the failure or success of a country's production diversification process and the development of its trade. By linking up remote communities and promoting their access to markets and employment, it also improves the population's living conditions. It also helps to open up certain regions and ensure a better distribution of wealth countrywide.

The impact of private investments on present and future production and transport costs is closely linked to infrastructure quality. Indeed, poorly adapted infrastructure may considerably reduce the return on private investment. In order to increase productivity and reduce costs, infrastructure investments must be carried out at an appropriate rate. Thus, infrastructure quality and its construction rate are contributing factors to the development of economic activity.

Morocco has made significant efforts in constructing its infrastructure network. They were initiated since the mid-90s and consolidated over the last decade. This is reflected in the various programs and growth-generating projects that were implemented or undertaken by the country

in several infrastructure sectors, especially in transport (all modes), hydraulics and drinking water supply, new information and communication technology and energy infrastructure.

To determine whether infrastructure is a constraint to Moroccan growth, both the quantity and cost of infrastructure will be analyzed, by reviewing its trend over time and comparing it with the reference countries. The transport, energy, water and sanitation sectors, and the telecommunications sector will be analyzed.

4.1 The Moroccan Economy's Infrastructure Supply

4.1.1 Quantitative and Qualitative Improvement of Transport in Morocco

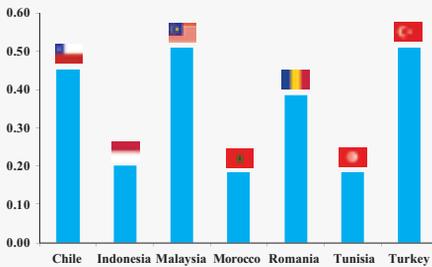
The process of opening up to international trade, promoted since the signing of the Barcelona Declaration in 1995, makes transport – land, air and maritime – a key factor of Morocco's economic success. Significant quantitative and qualitative efforts were made to develop and modernize road and railway networks as well as to upgrade ports and airports.

Nevertheless, the infrastructure development strategy in Morocco has not helped to reduce regional inequalities.

• Road Transport

Morocco has one of Africa's largest motorway networks. In 2012, after the commissioning of the Fez-Oujda motorway, the network rose to 1 416 km and was expected to reach 1 800 km in 2015. The entire road network stretches over about 60 000 km. However, its per capita density⁴⁷ is low in relation to the majority of the comparator countries (Malaysia, Turkey and Romania). However, it remains very close to that of Tunisia or Indonesia, which are also facing significant geographical challenges (Figure 4.1).

Figure 4.1: Road density in Morocco and comparable countries (for 100 inhabitants) in 2011

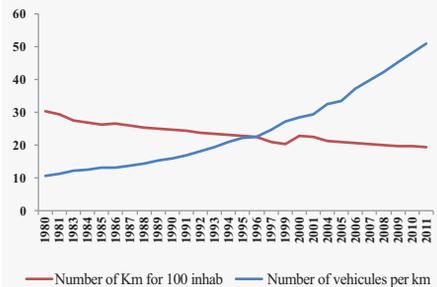


Source: WDI, World Bank

Road density per capita has risen steadily since the early 80s (Figure 4.2). Indeed, road network extension has matched

population growth: over the last decade and the entire Moroccan road network has only grown by 2.2%. (Table 4.1). This growth is attributable mainly to the expansion of the motorway network.

Figure 4.2: Density trend



Source: Ministry of Equipment, Transport and Logistics, Morocco

These densities also conceal significant inequalities. In fact, the Moroccan road network is characterized by sharp regional disparities, exacerbated by mountainous terrain and deserts. Density is very high between Tangier and Agadir and very low in the South and East regions. Nevertheless, taking into account economic activity and budget constraints, Morocco's road network was designed in such a way as to help to link the main domestic markets and serve export markets⁴⁸.

⁴⁷ In km per 100 inhabitants.

⁴⁸ Tests were conducted to verify the existence of a link between the number of road kilometers and income per capita between 1980 and 2011. They help to establish the existence of a causal relationship. The results indicate a double causality. The results and tests are presented in detail in Annex 4.1.

Road quality is improving constantly.

Most national and regional roads are paved. A significant effort has been made to pave provincial roads (60% of the network), which have risen respectively from 39% of paved roads in 2002 to 61% in 2012.

Table 4.1: Trend of road network quality

	2002	2012
Highways	479	1 416
National Roads	11 288	11 392
- Paved	9 551	10 185
- Unpaved	1 737	1 214
Regional Roads	10 152	10 091
- Paved	8 521	9 510
- Unpaved	1 631	581
Provincial Roads	35 787	35 844
- Paved	14 014	21 736
- Unpaved	21 773	14 108
Network total	57 706	58 750
Density Km/1000 Km²	81.18	82.65

Source: HCP

Access to rural roads has also improved very significantly as a result of the establishment of the first National Rural Roads Program (1995-2005), aimed at constructing

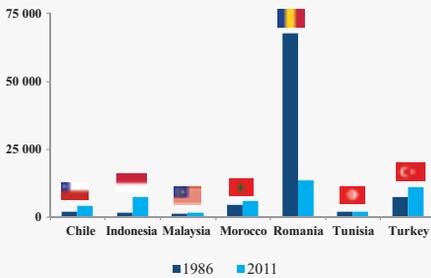
11 236 km, and the second National Rural Roads Program (2008-2012), aimed at constructing 15 500 km. In 1995, 36% of rural roads were accessible compared to 74% in 2011. This development of access to rural roads was important and facilitated economic activities, especially agricultural. Without reliable access, perishable goods like fruits and vegetables cannot be produced, and roads in poor condition increase the marketing cost of all products (Norton, 2009).

• **Railway Transport**

As concerns railway transport, both for goods and passengers, Morocco occupies an intermediate position among the comparator countries (Figures 4.3 and 4.4). Traffic increased for both passengers and goods between 1986 and 2011. Morocco is the only country, along with Indonesia and Tunisia, to have increased the number of passengers transported. By linking up towns that have strong economic activity like Casablanca or Rabat to tourist towns like Marrakesh or Fez, the rail network has improved the population's access to the main domestic markets⁴⁹.

⁴⁹ Tests were conducted to verify the existence of a link between the number of railway kilometres and income per capita between 1980 and 2011. They help to establish the existence of a causal relationship. The results indicate that the railway development has helped to raise the income per capita level. Details are presented in the annex to this chapter.

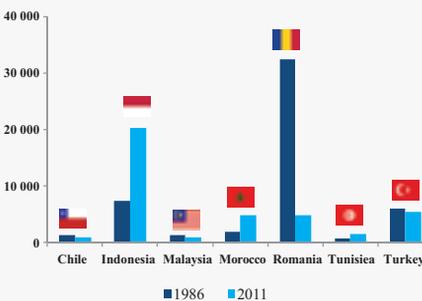
Figure 4.3: Railway transport, transported goods (millions of tons-kilometres)



Source: World Bank, WDI

However, the rail network is not evenly distributed over the territory. Important towns like Agadir, Tetouan and Beni Mellal are not linked by rail.

Figure 4.4: Railway transport, transported passengers (millions-kilometres)



Source: World Bank, WDI

Transportation of goods by rail is characterized by the predominance of phosphate traffic, which accounted for more than 76% of

transported tonnage in 2011. It also appears to be relatively undiversified.

• Air Transport

Great efforts have been made to develop the necessary infrastructure.

The air transport system in Morocco comprises 24 airports, including 17 international airports.

Since the signing of the Open Skies Agreement with the European Union and, especially since 2004, Morocco has implemented an open skies policy.

This has led to the arrival of new companies, the opening of new routes targeting tourist towns and lower ticket prices. This agreement ushered in many reforms in Morocco in a bid to harmonize standards with the European Union. The most significant changes concern the improvement of flight safety, the implementation of international standards, with consumer protection rules aligned with those of the European Union as well as environmental protection. That required the reform of the Civil Aviation Code and related regulations.

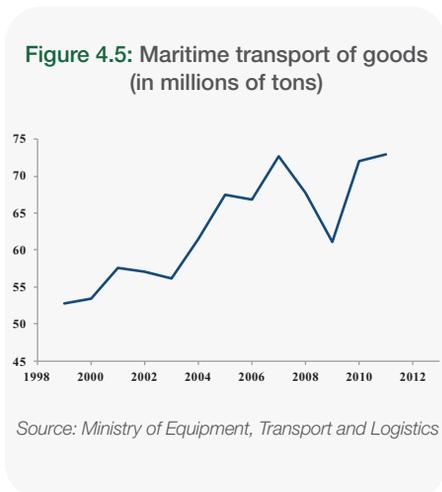
As part of the preparation for integration into the Single European Sky, the National Airports Authority (Office National de Développement des Aéroports) has initiated several important projects aimed at aligning air navigation services with European best practices and

standards, especially through (i) the strengthening of interoperability with bordering countries especially Spain and Portugal, through modernization of Asynchronous Transfer Mode (ATM) equipment; (ii) the harmonization of procedures; (iii) the certification of air navigation services under the twinning project with the European Union; and (iv) participation in R&D projects.

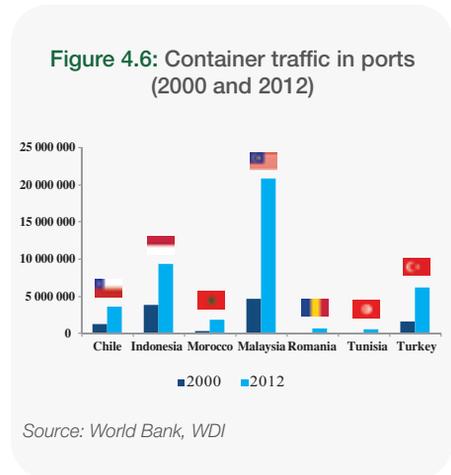
• **Maritime Transport**

Maritime transport in Morocco ensures the transit of more than 95% of foreign trade through 38 ports. In 2012, that represented 92 million tons of goods, 3.7 million passengers and 30 regular lines.

Maritime transport of goods and passengers has increased respectively by 37% and 110% since the late 1990s (Figure 4.5).



However, container traffic remains low. Morocco comes only ahead of Tunisia and Romania among the comparator countries (Figure 4.6).



Port capacities are being fully developed. Port facilities are in compliance with ISO standards. Out of the 12 ports presented in Table 4.2, more than half have not yet reached their theoretical capacity.

Table 4.2: Port capacities (million tonnes/year)

	Operational capacity (mT)	Theoretical capacity (mT)
Nador	5	13
Tanger	108	108
Kenitra	0.3	0.9
Mohammedia	17	24
Casablanca	31	38
JorfLasfar	20	38
Safi	9	8
Agadir	4	6
Tan tan	0,2	0,2
Laayoune	2	2
Warf	4	4
Dakhla	0,4	0,4
Total	201	243

Source: Ministry of Equipment, Transport and Logistics

In addition, the country's three main non-specialized ports (Table 4.3) have developed a hinterland with direct highway and railway connections.

Table 4.3: Characteristics of the 3 main ports

	Agadir	Casablanca	Tanger Med
Traffic 2012 (KT)	3.66	24.514	21.156
Surface (Ha)	42	87	78
Maritime fleet	Bulk (57%) Containers (28%) General goods (15%)	Bulk (42%) Containers (34%) General goods (24%)	n.d.
Connections to the port	Highway (Agadir-Marrakech)	Highway Railway	Road Railway
Regular lines	3	7	n.d.
Weekly capacities	2 250 (TEU)	6 780 (TEU)	n.d.
Infrastructure	5 terminals: Multipurpose (ro-ro, bulk), Containers, Cereals and passengers, Minerals, Oil	4 terminals: Multipurpose (ro-ro, bulk), Containers, Cereals and passengers, Minerals, Oil	Tanger Med (container terminals): Logistical platform

Source: Ministry of Equipment, Transport and Logistics

- **Logistics Infrastructure**

To enhance the competitiveness of the Moroccan economy in the equipment and transport sector, the logistic sector is a new strategic priority.

Within this framework, the government, in partnership with the private sector (CGEM), has established a strategy and an action plan for the improvement of the country's logistic competitiveness. This strategy seeks to provide adequate solutions to problems relating to the management of

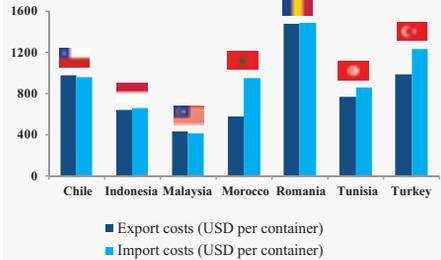
the flow of goods and meet the logistic needs of the different sector strategies.

The objectives set are to reduce logistic costs/GDP from 20% currently to 15% by 2015 through optimized, secure and large-scale management of the flow of goods. These objectives also concern the creation of 36,000 jobs and a contribution to the country's sustainable development through the reduction of nuisances and CO₂ emissions by 35% by the year 2015 and the decongestion of roads and towns due to sound management of distribution networks.

- **Cross-border Trade**

Government efforts have been conclusive since, in terms of logistic performances (Figure 4.7), Morocco is relatively well-positioned for exports. Although the number of documents required exceeds the average, time-limits and costs are among the lowest. However, transit times for the Casablanca and Tangier ports, which dominate port traffic (respectively by 14.9 and 5.1 million tons in 2007), remain lower than those of the nearby ports of competing countries. There is potential for capacity building. On the other hand, the time-limits, number of documents and import-related costs remain relatively high. It is, therefore, less costly and easier to export than to import.

Figure 4.7: Transborder trade costs



Source: World Bank, WDI

Transport infrastructure in Morocco is developing. Medium-term economic development will require larger scale infrastructure. The number of ongoing infrastructure projects confirms the government's awareness of this.

Box 4.1: Ongoing Transport Infrastructure Projects

Road transport:

- Rabat bypass motorway: 41.1 km, MAD 2 800 M.
- Tit Mellil-Berrechid motorway: 31 km, MAD 1 300 M.
- Berrechid-Beni Mellal motorway: 172 km, MAD 6 030 M.
- El Jadida-Safi motorway: 140 km, MAD 4 800 M.
- Taza-Al-Hoceima expressway: 148 km, 2 500 M MAD.

Railway transport:

- Tangier-Kenitra-Casa HST project: MAD 20 000 M.
- Renovation of the Casa-Port railway station.

Port projects:

- Tanger Med II: MAD 18 billion (commissioning 2015-2016)
- *Nador West Med:*
 - 1st phase of MAD 5.9 billion (commissioning in 2015), dedicated to refined oil products, total capacity of 15 million tons/year.
 - 2nd phase: MAD 1.6 billion for two other structures dedicated to crude oil, total capacity of 20 million tons/year.
- *New Safi port:*
 - 1st phase: MAD 4 billion (commissioning 2017). To meet the coal requirements of the ONEE thermal plant.
 - 2nd phase: disengagement of the former Safi port from handling the OCP group's mineral products to enable it (as from 2020) to export phosphate and its by-products directly.

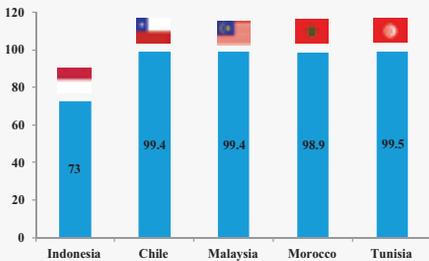
Airport projects:

- Development of the Beni Mellal airfield (MAD 195.5 M);
- Development of terminal facilities in the Mohammed V Airport (MAD 938 M);
- Development of terminal facilities in the Marrakech Ménara Airport (MAD 1084 M);
- Extension of terminal facilities at Fez Saiss Airport (MAD 479 M);
- Extension and renovation of the passenger terminal at Nador Airport (MAD 315 M);
- Construction of a regional/south zone control tower (MAD 256 M).

4.1.2 Significant Electricity Development

National development strategies have ensured Morocco's inclusion among the 20 countries which have achieved the highest electricity access rates over the period 1990-2010⁵⁰ (World Bank, 2013). Indeed, connection rates are very high: almost 99% of households are connected to the electricity network (Figure 4.8). Government efforts to extend rural electrification have helped to reduce disparities between urban and rural areas. About 98% of the rural population had electricity access in 2012.

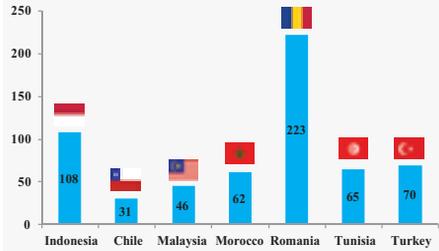
Figure 4.8: Electricity access (percentage of population) in 2010



Source: World Bank, WDI

The time required to obtain electricity is among the lowest with 62 days for Morocco compared to 65 for Tunisia, 70 for Turkey, 108 for Indonesia and 223 for Romania (Figure 4.9).

Figure 4.9: Timeframe needed to have electricity (number of days) in 2012



Source: World Bank, WDI

Morocco has a well-integrated electricity network at the regional level. The Maghreb Regional Interconnection, including Morocco, Algeria and Tunisia, was initiated in the 1950s and expanded to achieve many high-voltage transmission interconnections among these three countries. Morocco was connected to Spain in the 1990s, and it has now synchronized with the Pan-European High-Voltage Transmission Network.

Many reforms have been implemented in the electricity sector, especially since its opening up to private operators.

The average household electricity price has remained almost stable since the early 90s, which is not the case for enterprises since, after a drop between 1998 and

⁵⁰ Sustainable Energy for All, Global Tracking Framework, 2013.

2005, the prices started rising again. However, it should be indicated that, if these prices have remained relatively stable, it is due to the great subsidy effort made by the government to offset the difference between the cost of energy generation and/or acquisition for the

National Electricity and Drinking Water Authority (ONEE) and its selling price. This explains ONEE's difficult financial situation in recent years. Consequently, the intermittent increases made are chiefly intended to pass on part of the energy cost to users in order to reduce ONEE's costs.

Box 4.2: Main Electricity Sector Projects since 1990

- **Development of independent power producers through competitive bidding and the obligation to conclude long-term power purchase agreements with ONE (Decree-Law 1994):**
 - 1997: *Jorf Lasfar Energy Company, coal plant 1 360 W (48% of national production).*
 - 1998 : *Compagnie Eolienne du Détroit, THELIOA group, Abdelkhalek Torres wind park, 50 MW*
 - EET – ONE/ENSEA/SIEMENNS company, Tahaddart combined-cycle plant, 384 MW.
 - *Ongoing projects: Tarfaya wind farm ...*
- **Delegation of multiservice distribution to private operators**
 - *Casablanca: Lydec, GDF SUEZ group, 1997.*
 - *Rabat, Salé and Temara: Redal, VEOLIA group, 1999.*
 - *Tanger and Tetouan: Amendis, VEOLIA group, 2002.*
- **Launching of the overall rural electrification program in 1996**
 - *Generalization of electricity access to all rural households.*
- **Interconnection of the national electric power grid with the Spanish grid in 1997**

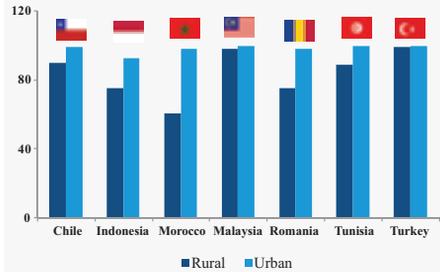
Morocco's electrification plan seems to have been successful. The electricity access rate is very high and timeframes for obtaining electricity are low. However, there is still uncertainty regarding the trend of electricity prices.

4.1.3 Persistent Disparities in Water and Sanitation Facilities

The fragmented distribution of Morocco's population throughout the country raises a serious challenge regarding access to water and sanitation facilities. It represents a real challenge for the development of agriculture and tourism.

Nevertheless, the government's water supply development strategy has helped to increase access significantly, but regional disparities remain. Access to an improved water source, according to the World Bank definition⁵¹, has developed significantly in urban areas, reaching almost 98.2% of households in 2011 compared to 60.8% in rural areas (Figure 4.10).

Figure 4.10: Population rate of access (%) to improved water sources



Source: World Bank, WDI

However, considerable efforts have been made to facilitate water access in rural areas. Indeed, when the definition of water access is modified and the drinking water access rate is taken as the percentage of the population having access to drinking water at home or from a supply point within a 200-m radius in towns and 500-m radius in rural areas, in relation to the total population, the access rate in the urban area reached 100% since 1997, representing significant growth since 1975 through individual

⁵¹ Access to an improved water source is the percentage of the population which has reasonable access to a sufficient quantity of water coming from an improved source such as a domestic water container, a public tank on the ground, a well, a protected spring or well or collected rainwater. Unimproved sources include sellers, tankers and unprotected springs and wells. Reasonable access is defined as being the daily availability of at least 20 litres per person coming from a source situated within a one-kilometre radius from dwellings.

connections. The rural access trend once again rose more rapidly from 22% in 1975 to 92% in 2011. However, data does not make it possible to distinguish individual access from access by standpipe.

Water access efforts are continuing, with the objective of increasing storage capacity by almost 32 000 m³. An investment of about MAD 1 030 M had to be made by ONEE in 2013 to improve rural drinking water supply (DWS), which was expected to increase the average national access rate to 94% (compared to 93% in 2012). This rate varies across regions: 81% in Doukkala-Abda, 83% in Tangier-Tetouan, 84% in Taza-Al Hoceima-Taounate, 99% in Oued Eddahab-Lagouira as well as in Fez-Boulemane and Salé-Zemmour-Zaer. Disparities also exist between provinces of the same region with rates, at times, not exceeding 65%.

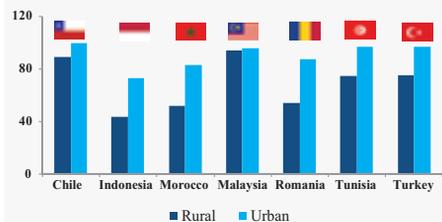
Furthermore, the sanitation sector has long been a weak link in Morocco's water policy. Indeed, its situation is characterized by (i) the low priority given to waste water management and the needs of operators; (ii) the partial coverage of networks, which are outdated and saturated; (iii) a limited number of wastewater treatment stations; and (iv) an estimated urban wastewater volume of 600 million m³ discharged in 2005, without prior treatment.

To close the gap and upgrade this sector, the National Liquid Sanitation and Waste-

water Treatment Program [Programme National d'Assainissement Liquide et d'Épuration des Eaux Usées] (PNA) was established in 2005 and updated in 2008. Since its implementation, a marked improvement has been observed. The rate of connection to the urban area network is estimated at 72% and the wastewater treatment rate reached 34% compared to 8% in 2005. The PNA was established for urban and semi-urban areas, but certain rural centers have also benefitted from sanitation projects under this program.

However, further improvements are required in the sanitation sector. Indeed, in 2011, sanitation facilities remain to be developed; since only 83.1% of urban households and 52% of rural households had access to them (figure 4.11). Compared to the reference countries, Morocco remains behind in this sector.

Figure 4.11: Population rate of access to improved sanitation facilities in 2011



Source: World Bank, WDI

However, objectives pursued by the Government confirm awareness of the need to close the

gap with regard to liquid sanitation, in relation to the country's current and future needs.

Box 4.3: Objectives of the PNA

Establishment of the National Liquid Sanitation and Wastewater Treatment Program in 2005 and its update in 2007, jointly with the Ministry of Interior and the Department of Environment. The plan concerns 330 towns and urban centers (10 million inhabitants).

Objectives:

- Achieve a sanitation network connection rate of 75% in urban areas in 2016, 80% in 2020 and 90% in 2030;
- Reduce domestic pollution by 50% in 2016, 60% in 2020 and 100% in 2030;
- Treat and reuse 100% of collected wastewater by 2030;
- Construct wastewater treatment stations for 330 towns and urban centers.

Overall cost: MAD 50 billion by the year 2020.

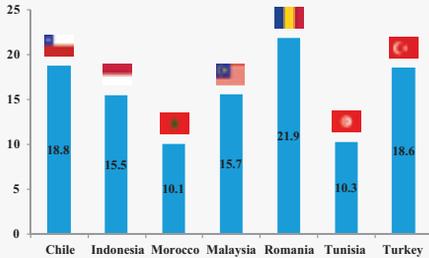
4.1.4 Telecommunications

In 1997, Law n°. 24-96 initiated a profound change in the telecommunications sector with the market opening up to private initiatives and national and international developers. This reform sought to extend posts and telecommunications networks and services to the entire territory, while developing competitive situations among operators. This sector

was restructured around partial privatization of the historic operator and the establishment of a regulatory body, the National Telecommunications Regulatory Agency (ANRT).

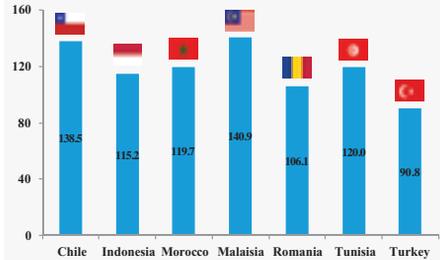
As concerns the fixed telephone network, despite the slight increase in telephone density, in recent years, it is still insufficient in relation to the level attained by the Reference countries (figure 4.12).

**Figure 4.12: Fixed telephone lines
(for 100 inhabitants) in 2012**



Source: World Bank, WDI

**Figure 4.13: Mobile telephone lines
(for 100 inhabitants) in 2012**

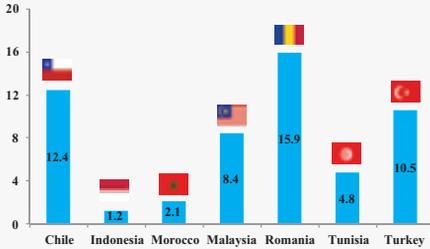


Source: World Bank, WDI

However, this weakness was largely offset by a sharp increase in mobile telephony. Thus, Morocco has the highest number, among the reference countries, of mobile telephone subscriptions per 100 people (Figure 4.13). The low level of fixed telephone subscriptions, coupled with a sharp growth in mobile telephony subscriptions is one of the characteristics of economies in transition (African Economic Outlook, 2009). However, this limits the possibilities of developing fiber optic and, therefore, high speed.

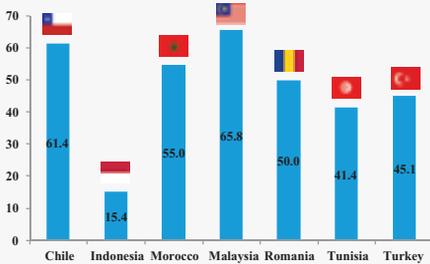
Internet rates have fallen sharply. Nevertheless, the number of high-speed internet subscriptions is only 2.09 for 100 people, which remains insignificant compared to the reference countries (Figure 4.14). Morocco's lagging behind can largely be explained by the low number of fixed telephone lines. Conversely, the number of internet users is one of the highest in the group of selected countries, with 55 users per 100 people (Figure 4.15). The gap is therefore at the level of installation and not use.

Figure 4.14: High-speed internet subscriptions (for 100 inhabitants) in 2012



Source: World Bank, WDI

Figure 4.15: Number of internet users (for 100 inhabitants) in 2012



Source: World Bank, WDI

Market trends and the population's enthusiasm for new telecommunications tools – as reflected in the growing number of mobile telephone users – are indicators of strong growth for the coming years. However, it is important to find a solution to the gap in developing fixed telephone lines, which might restrict internet subscriptions.

4.2 Growth Diagnostic Tests

4.2.1 Infrastructure Quality Comparison

In the first stage, the degree of severity of the infrastructure supply constraint in Morocco is analyzed. It would be wrong to consider that only a low level of infrastructure represents a major constraint. To avoid that, this test uses an international infrastructure quality and not quantity indicator and analyses Morocco's position in relation to the reference countries.

The infrastructure quality-related indicator of WEF (World Economic Forum) does not reveal any particular constraint. Morocco does not seem to be insufficiently developed in infrastructure. The country was ranked 57th in the world in 2013 (Table 4.4). Compared with the reference countries, it occupies a median position, with a higher quality level than in Indonesia, Romania and Tunisia.

Table 4.4: Infrastructure quality

	Classification according to infrastructure quality, 2013
Morocco	57
Chile	46
Indonesia	61
Malaysia	29
Romania	100
Tunisia	77
Turkey	49

Source: World Economic Forum, 2013

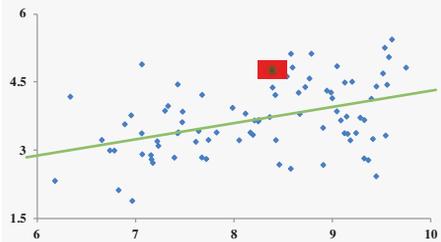
4.2.2 Type 2 Test: Estimation of the correlation between an infrastructure quality indicator and GDP per capita

The test seeks to determine the link between infrastructure and a country's level of economic development. An insufficient level of infrastructure can impede the economic activity of domestic enterprises. This test measures the level of severity of the constraint by situating Morocco in relation to comparable countries to answer the following question: Is the quality level of general infrastructure and/or trade and transport infrastructure sufficient given the GDP/per capita level?

Morocco seems to have an infrastructure performance level higher than its development level. Figure 4.16 illustrates the correlation between real income per capita in 2012 and a general infrastructure quality index. Figure 4.17 uses a more specific index which concerns trade and transport infrastructure quality. The regression line indicates the infrastructure level expected at a given economic development level. For general infrastructure, such as for trade and transport infrastructure, Morocco is above the estimated regression line,

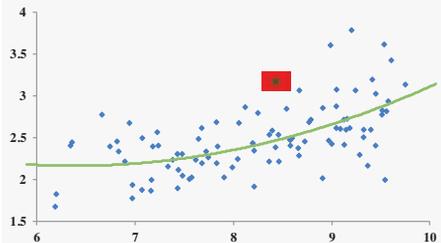
which indicates that it has an infrastructure performance level higher than its development level.

Figure 4.16: Infrastructure quality and GDP per capita



Source: World Bank and World Economic Forum

Figure 4.17: Trade and transport infrastructure quality and GDP per capita



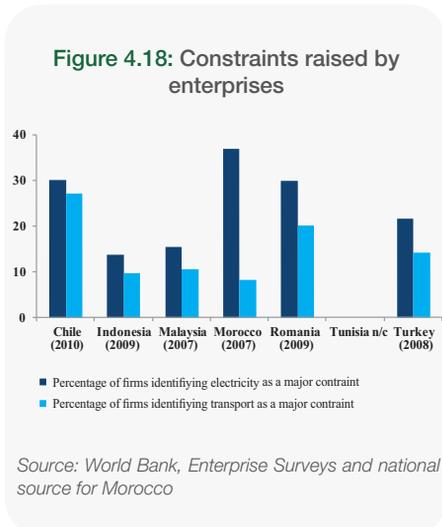
Source: World Bank, WDI and WEF

4.2.3 Type 3 Test: How Firms Bypass the Constraint?

Test 3 aims to identify if, and how, domestic firms bypass the infrastructure constraint.

Indeed, private sector enterprises are still aware of the constraints that they must address to ensure their development, and, in order to survive, they must bypass the constraint.

When the constraints mentioned by firms to ensure their development are analyzed, electricity seems to be the most significant. 37% identify electricity as a major constraint and 6.7% transport. This percentage of answers identifying electricity as the major constraint is high when compared to answers given by firms in the comparator countries (Figure 4.18). Indeed, this rate is only 30% in Chile and in Romania, 21.6% in Turkey, 15.5% in Malaysia and 13.8% in Indonesia.



Morocco's position (table 4.5) in terms of electricity access, however, is fairly satisfactory in relation to the comparator countries.

Table 4.5: World ranking and electricity access procedures

Electricity access		
Country	Ranking	Procedures (number)
Chile	40	6
Indonesia	147	6
Malaysia	28	5
Morocco	92	5
Romania	168	7
Tunisia	51	4
Turkey	68	5

Source: World Bank and World Economic Forum

Furthermore, the average outage time for the electricity transmission network has dropped since 2007, whereas that of the distribution network increased from 2007 to 2010, before dropping in 2011 (Table 4.6).

Table 4.6: Electricity outages

Years	Transmission network	Distribution network
	Outage time (overall, mn)	Average outage duration of a MT System (DMS, in H:mn)
2007	20.4	05:48:00
2008	22.9	08:38:00
2009	9.9	09:30:00
2010	8.1	10:46:00
2011	5	04:53:00
2012	4	03:49:00

Source: ONEE

Many Moroccan firms have generators compared to other countries (Table 4.7).

This could be because of electric power outages. However, the low level of electricity

produced by these generators as well as the historic obligation for certain firms to have generators do not seem to support this assumption. The problem raised by enterprises could, therefore, come from the price, but nothing enables us to prove it.

Table 4.7: Generator Use

	Percentage of firms having or sharing a generator	Proportion of electricity produced by the generator (%)
Chile (2010)	46.5	3.2
Indonesia (2009)	6.3	1.7
Malaysia (2007)	16.1	0.8
Morocco (2007)	18	1.1
Romania (2009)	14.6	1.6
Tunisia n/c	n/c	n/c
Turkey (2008)	8.6	0.3

Source: World Bank, Enterprise Survey and national source for Morocco

4.2.4 Type 4 Test: Does Limited Infrastructure Impede the Development of Firms?

This test seeks to determine if enterprises with the greatest need for electrical infrastructure are the most restricted in their development. To do this, the infrastructure intensity level of enterprises should be identified by sector and by region, and compared with their economic performance level.

If electricity is a major constraint to the development of economic activities, firms in high-energy consuming sectors should experience development problems compared to others.

The most sensitive sectors do not, however, appear to have followed a trend in their value added different from other sectors. The sectors concerned are wood and wooden products, paper and paper products, rubber and plastic products, other non-metal products and basic metals. The number of firms in these sectors increased between 2000 and 2009, with a few exceptions. Therefore, they do not seem to have been impeded in their development.

The analysis of value added distribution over the territory shows that infrastructure does not seem to be a major constraint to economic growth, since regions relatively less well-endowed in infrastructure contribute to wealth creation in a relatively significant manner like Beni Mellal-Khénifra (8.1%) and Daraa-Tafilalt (3.3%). Therefore, infrastructure does not constitute a major constraint to growth.

4.3 Second-Round Effects

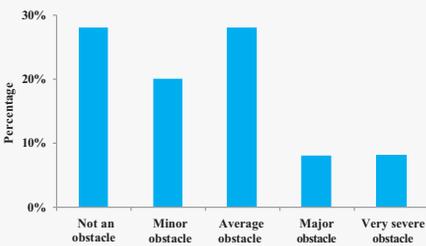
Infrastructure does not seem to be a major obstacle to growth, but it can induce second-round effects. Indeed, there can be strong interdependence between land access for enterprises and

installed infrastructure. Thus, infrastructure development throughout the territory can result in increased demand for land by enterprises.

The survey conducted by the Moroccan Government on a sample of manufacturing sector firms in 2007 shows the close link between infrastructure and land.

Enterprises are usually established in areas where basic infrastructure does not pose problems. Indeed, in this survey, firms declared that electricity infrastructure did not represent a major constraint to their establishment and the smooth conduct of their operations. Similarly, water infrastructure does not cause any serious impediments to the effective establishment of an enterprise on the territory (Figure 4.19).

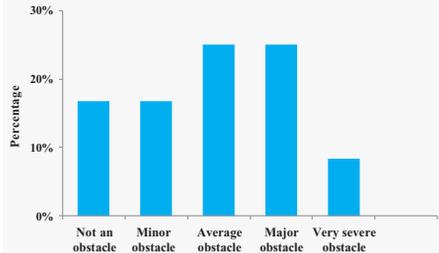
Figure 4.19: Transport infrastructure and land acquisition (degree of severity)



Source: Enterprise Survey, Morocco 2007

On the other hand, the condition of roads and urban transport access are serious constraints to the establishment of enterprises (Figure 4.20).

Figure 4.20: State of roads and land acquisition (degree of severity)



Source: Enterprise Survey, Morocco 2007

The expansion of infrastructure and its even distribution over the territory could result in a considerable increase in demand for access to land by enterprises, thus leading to new pressure on it.



Chapter 5

Natural Capital



Chapter 5: Natural Capital

Key Messages

- Natural capital is a key component of a country's sustainable development. The capacity to use new technologies to optimize natural resources is an important contributing factor to economic development.
- Morocco is not as well-endowed as certain countries in natural fossil fuel resources and adequate water resources, but it has geographical proximity to the European Union and exceptional phosphate deposits.
- Morocco's natural resources are fairly well developed, which is not a major impediment to growth.
- Arable land and phosphate are resources requiring further development.
- Considering Morocco's heavy dependency on conventional energy resources, its alternative energy development efforts should be pursued.
- While pricing policies may further social and economic objectives, they may also distort the relative prices of natural resources, which prevents their efficient allocation and sustainable management.

Introduction

Natural capital is an essential component of a country's sustainable development.

The availability of natural resources as well as the geographical position can be both drivers of growth and obstacles to smooth development.

Morocco has an ideal geographical situation and exceptional phosphate resources, but it does not have its neighbors' assets in terms of energy resources, nor sufficient water resources. Situated at the gateway of Europe, on the other side of the Straits of Gibraltar, north of Mauritania and west of Algeria, Morocco has access both to the Mediterranean Sea and the Atlantic Ocean. The country has the largest coastal region in the African continent, with more than 3500 km of coastline, including 500 km in the Mediterranean.

This chapter highlights two areas of fragility directly linked to productive activity: water and energy. The Government's significant efforts to remedy the situation have resulted in heavy expenditure for the general government budget ensuring that these two weaknesses are not major impediments to the development of the economic activity of Moroccan enterprises.

5.1 Basic Resources

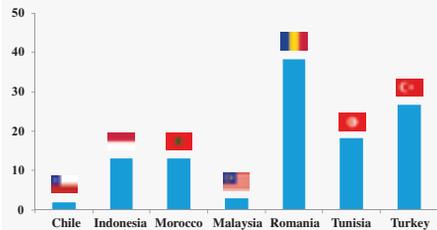
5.1.1 Geographical Position

Situated between Sub-Saharan Africa and Europe, Morocco has an ideal location on the Mediterranean and on the Atlantic and close to international markets.

5.1.2 Land

Arable land represents only 13% of the territory (Figure 5.1). This situation is particularly challenging as the major part of the country is made up of arid and mountainous areas. However, the proportion of arable land per capita remains within the average of the comparator countries with 0.25 hectare per capita. 59% of agricultural land is used for cereal farming.

Figure 5.1: Arable land (percentage of territory)

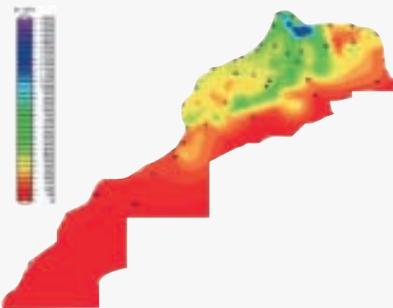


Source: World Bank, WDI

5.1.3 Water

Morocco is a water-stressed country with very low rainfall. The country is characterized both by a Mediterranean climate to the North and an arid climate to the South and the south-east of the Atlas Mountains, with a dry, hot season and a cold, humid season. Water is a scarce resource and it is unevenly distributed among the various regions (Figure 5.2). Annual rainfall exceeds 800 mm in the North region, with the heaviest rainfall from 400 to 600 mm in the center, from 200 to 400 mm in the Oriental and Souss region, from 200 to 50 mm in the South Atlantic region, and less than 50 mm in the most arid area, the Sakia El Hamra and Oued Eddahab basins.

Figure 5.2: Rainfall in Morocco

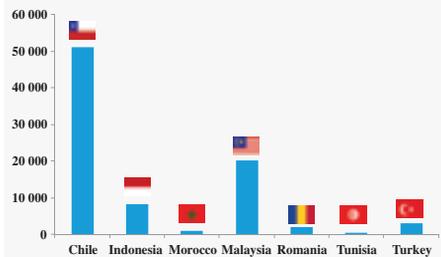


Source: Ministry of Energy, Mines, Water and Environment

In 2011, with slightly over 904 m³ of renewable water resources per year and

per capita (according to the World Bank definition), Morocco has the lowest level of resources, after Tunisia which boasts of 393 m³ (figure 5.3). This comparison with countries highlights Morocco's worrisome situation.

Figure 5.3: Renewable water resources per capita (in m³)



Source: World Bank, WDI

Nevertheless, drinking water production has increased by a factor of 5 during the last three decades rising to over 1 billion m³ in 2007. However, the 135 existing dams in Morocco have a storage capacity lower than the population's annual water consumption.

20% of Morocco's water resource potential is comprised of groundwater as reflected in the distribution of groundwater tables identified (Figure 5.4). In addition, almost 10% of the national territory is covered by the most extensive aquifer systems (about 80 000 km²).

Figure 5.4: Groundwater tables



Source: Ministry of Energy, Mines, Water and Environment

However, surface and groundwater water is of poor quality (Table 5.1). According to the latest analyses, it is estimated that 8 to 10% of nitrogen used as fertilizer for agriculture is washed into groundwater tables or into watercourses and that 0.5 to 1% of pesticides drain on to watercourses, representing a current pollution of 8,500 tons of nitrogen and 15 tons of pesticides. In addition, a large part of wastewater is discharged into the natural environment without prior treatment.

Table 5.1: Quality level of surface water and groundwater

Type of resource	Good	Average	Poor
Groundwater	20%	29%	51%

Source: Water quality study, DGH, 2011

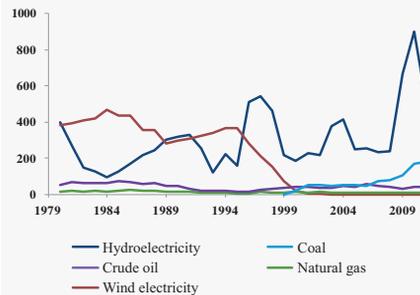
Estimated water scarcity projections are disturbing. The rate of natural water resources per capita expresses a country's water supply or relative scarcity. According to Government projections (Water Quality Study, General Directorate for Hydraulics, 2011), this rate is expected to fall to 625 m³/pc/year in 2020, given that the critical threshold is 1 000 m³/pc/year.

5.2 Extractive Resources

5.2.1 Fossil Fuels

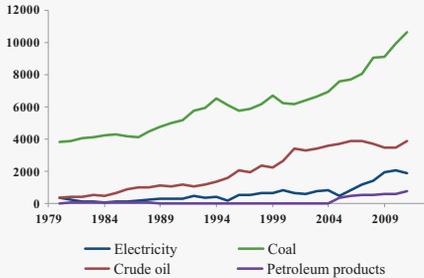
Morocco is not very well endowed with conventional energy resources. Its main energy production comes from hydroelectricity (Figure 5.5).

Figure 5.5: Energy production (thousands of TOE "Tons of Oil Equivalent")



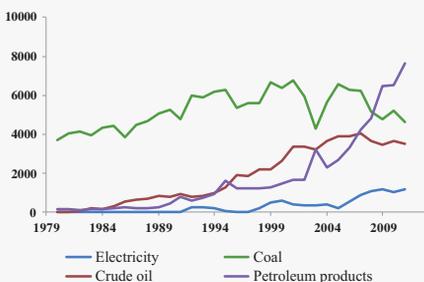
Source: Ministry of Energy, Mines, Water and Environment

Oil products are predominant in its energy consumption and their share has continued to grow since the early 80s (Figure 5.6).

Figure 5.6: Energy consumption
(thousands of TOE)

Source: Ministry of Energy, Mines, Water and Environment

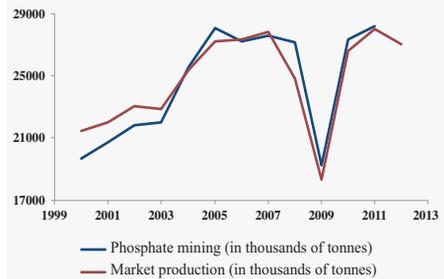
This low endowment in fossil energy makes Morocco a huge energy importer (Figure 5.7). The share of oil products in energy imports remains predominant with 45% in 2011. They also account for a very high proportion of total imports of goods that has continued to grow since the early 90s.

Figure 5.7: Energy imports
(thousands of TOE)

Source: Ministry of Energy, Mines, Water and Environment

5.2.2 Phosphate, an Exceptional Endowment

Morocco is the leading phosphate exporter with 40% of the world market for crude phosphate, 50% for phosphoric acid and 21% for fertilizers. Except for the world crisis period, phosphate production and mining have increased steadily since the late 90s (Figure 5.8).

Figure 5.8: Phosphate mining and production

Source: Cherifian Office for Phosphates

5.3 Resource Development

5.3.1 Capitalizing on Geographical Proximity

Morocco's proximity to the European Union makes this market a preferred partner in its foreign trade. The country sells more than 50% of its exports on the European Union market.

By developing its transport infrastructure and lowering trade barriers, the Moroccan Government has been able to take advantage of its geographical position by increasing trade with neighboring countries. Thus, countries like France and Spain, the closest geographically, on their own, account for 39% of Moroccan exports.

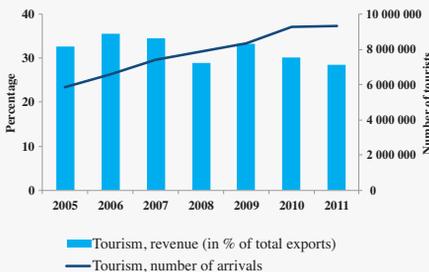
Morocco's rich natural capital, its sunshine and its proximity to Europe attract many tourists and make the country a preferred destination. Despite the crisis periods, the number of tourists has continued to rise (Figure 5.9). Tourism in Morocco is also one of the activities with strong potential for development of the country's geographical proximity.

5.3.2. Land Development

The agricultural sector plays a very important economic and social role in terms of contribution to growth, job creation and food security.

With relatively low yields, land in Morocco could be better developed. Most farms (1.5M) are of a semi-subsistence type with low yields (Oulhaj et al. 2012). Agricultural production is characterized by the coexistence of a large number of small farms, the low quality of their production, very limited market integration and a limited number of high value-added, large-scale farms most of whose production is exported. For example, the only cereal produced for marketing is soft wheat. Certain regions are almost entirely specialized in this crop, even though it is not necessarily the most suitable production. Furthermore, the coverage rate, representing the relationship between the value of exports and that of imports of agricultural products has decreased since 1990, indicating a deficit in agricultural products (Table 5.2).

Figure 5.9: Tourism trend in Morocco



Source: World Bank, WDI

Table 5.2: Cover rate of the agricultural balance (in percentage)

Country	1990	1995	2000	2005	2010
Chile	603.5	472.9	450.3	468.4	345.2
Spain	64.5	114.6	82.8	76.3	79.8
India	76.5	88.9	101.9	96.8	108.8
Mexico	203.7	210.5	149.0	136.6	132.9
Morocco	112.1	74.4	89.9	92.9	75.5

Source: Calculations of Oulhaj and alli. (2012) based on World Bank and World Trade Organization data

According to Oulhaj et al. (2012), net imports are positive and more significant in the fruit and vegetable subsector.

This situation has gradually deteriorated because of increased domestic consumption at a rate above that of the population and low yields (Akesbi, 2011). While remaining low, oilseed yields have increased since the early 1980s and those of cereals and legumes have risen slightly. On the other hand, industrial crop yields have continued to fall.

The Moroccan agricultural sector has to address several constraints. The investment level is relatively low, organization and supervision are inadequate and water resources are limited. This sector must overcome an additional constraint which is the excessive fragmentation of holdings (an average of 6 plots per farm). In addition, almost 70% of farms have surface areas below 5 hectares. The plethora of legal land ownership systems, as well as low registration

and titling rates pose a serious threat to investment in this sector.

Aware of the land challenge, the Government established the strategy known as the Green Morocco Plan for the 2008-2020 period. This is a far-reaching program focused on seven thrusts: (i) making agriculture the main growth driver, (ii) adopting aggregation as the agriculture organization model, (iii) ensuring the development of agriculture in its entirety, (iv) promoting private investment, (v) adopting a contractual approach to implement this plan, (vi) sustaining agricultural development and (vii) preparing an overhaul of the sector framework.

5.3.3 Water Development

The water resource situation is worrisome, but the Government has made considerable efforts. Indeed, the Water Department has implemented several measures which are an integral part of the National Water Strategy, published in 2009 and divided into three components: water conservation in agriculture, strengthening of water infrastructure and mobilization of non-traditional water resources.

The Government has initiated the exploitation of abundant resources such as sea water or wastewater and their enhancement through new technologies like desalination plants using solar or

wind energy in order to respond to water shortages. In addition, the significant efforts made in water infrastructure have contributed to the development of large-

scale irrigation (Table 5.3). Consequently, the surface area currently irrigated is almost 1.5 M hectares, two-thirds of which is equipped by the public authorities.

Table 5.3: Various types of irrigation

Type of irrigation	Gravity	Spraying	Localized	Total	Percentage
Large-scale irrigation scheme	533 900	113 800	34 900	682 600	47.0%
Small and medium scale irrigation scheme	327 200	6 900	-	334 100	23.0%
Private irrigation	317 600	16 950	106 900	441 450	30.0%
Total	1 178 700	137 650	141 800	1 458 150	100%

Source: Ministry of Agriculture and Maritime Fishing

5.3.4 Alternative Energy Development

Morocco's energy dependence has continued growing in line with the rise in consumption of the resource. The dependency rate rose from 82% in 1980 to 95.6% in 2011.

In order to address this worrisome situation, the Government launched a large-scale energy strategy particularly based on

solar (with the Moroccan Integrated Solar Energy Project) and wind (with the Moroccan Integrated Wind Energy Project) energy. By using new technologies, the Government has been able to utilize non-exhaustible and clean natural resources such as the sun and wind to reduce the energy deficit. The new installed capacities in 2012 (table 5.4) and the various plans established indicate that energy production will develop rapidly over the coming years.

5.3.5 Phosphate Development

From the employment standpoint, the Office Chérifien des Phosphates (OCP) directly employs more than 22 000 people, thereby generating activity upstream and downstream of the subsector. Its production is intended both for the local and export markets.

Locally sold quantities have continued to increase since the early 2000s. Furthermore, phosphate contribution to exports is very significant since it accounted for 27% in 2012 compared to 16.2% in 2000, and over MAD 48.4 billion in foreign exchange revenue (African Economic outlook, 2013). Exports increased in value more rapidly than in volume between 1980 and 2010.

Phosphates represent an exceptional endowment for Morocco. Most products from this ore are relatively unprocessed. Therefore, there is scope for the development of this resource.

5.4 Growth Diagnostic Tests

5.4.1 Comparison of Water and Land Availability

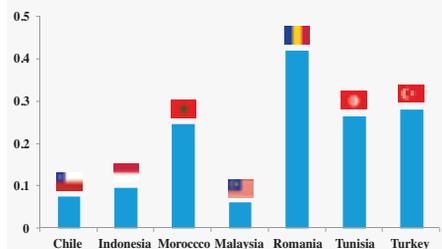
The first test consists in analyzing water resource and arable land availability in relation to the comparator countries. The objective of this test is to determine

whether water and land are scarce resources in Morocco.

Morocco has a very low renewable water resource level in relation to country comparators. Nevertheless, when it is compared to a country closer to it in terms of geographical characteristics such as Tunisia, its water resources and the percentage of irrigated agricultural land are much higher. Even though the country has limited resources, the irrigation-related effort made by Morocco for several years now makes the situation sustainable.

For land availability, the proportion of arable land remains within the average with 0.25 hectares per capita (Figure 5.10). Morocco is ranked ahead of Chile, Indonesia and Malaysia. The area of land seems to be reasonable.

Figure 5.10: Useful agricultural surface area per capita



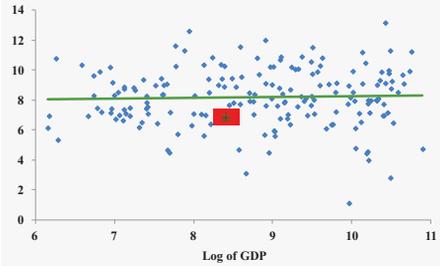
Source: World Bank, WDI

5.4.2 Type 2 Test: Estimation of the Correlation Between Resources (Water and Land) and the Level of Economic Development

The second test aims to determine the link between water resources and land availability and the level of economic activity. An insufficient level of renewable water can impede the smooth running of industrial enterprises and agricultural activity. Similarly, low land availability can also lead to development difficulties. This test, therefore, measures the severity of the constraint by situating Morocco in relation to the comparator countries to answer the following question: Is water and arable land availability adequate considering the country's economic activity?

However, Morocco seems to have a renewable water availability level lower than its level of economic activity. Figure 5.11 illustrates the correlation between real income per capita in 2012 and the level of renewable water resources. The regression line indicates the expected level of renewable water resources in relation to the level of economic activity. Here, Morocco is below the regression line, which indicates that it has an inadequate level for its level of development.

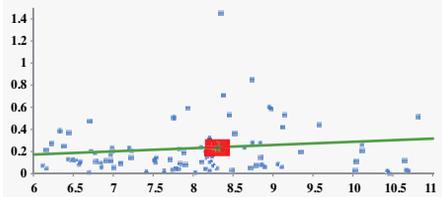
Figure 5.11: Renewable water resources and wealth level (log of GDP/per capita in PPP, 2005 constant \$)



Source: World Bank, WDI

On the other hand, the level of arable land availability does not seem to impede economic activity. According to figure 5.12, Morocco is on the regression line. It appears, therefore, that the level of arable land availability corresponds to agricultural value added per worker.

Figure 5.12: Arable land and agricultural value added (log/per capita, 2005 constant \$)



Source: World Bank, WDI

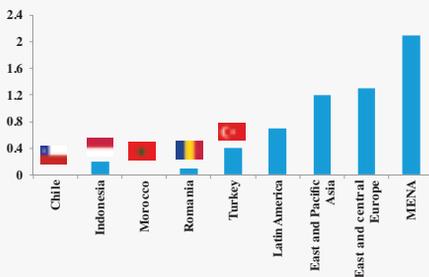
5.4.3 Type 3 Test: Are Firms Obligated to Bypass the Constraint?

Test 3 seeks to identify the need for firms to by-pass the constraint. The aim here is to analyze whether it is necessary for domestic firms to bypass the resource availability constraint.

Moroccan firms do not seem to be obliged to bypass the constraint.

They declare that they do not have water shortages (Figure 5.13). Morocco's situation seems more favorable when compared to the average of MENA countries where enterprises claimed during surveys to have experienced "2.1 water shortages" per month.

Figure 5.13: Number of water shortages (per month) declared by firms



Source: World Bank, Enterprise Surveys

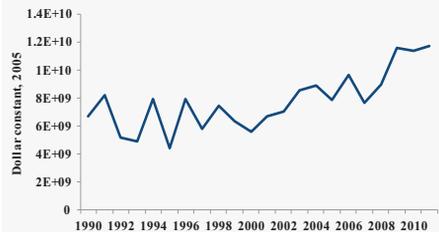
5.4.4 Type 4 Test: Are Firms Requiring more Water and/or Land Hindered in their Development?

This test seeks to identify whether firms whose activity requires more water and land are most challenged in their development.

Generally, the economic activity which makes most use of water and arable land availability is agriculture. Thus, the test consists in analyzing the agricultural sector's economic performance, as well as that of the agri-food sector which is closely linked to it.

If water or land was a major constraint to the development of economic activity, agricultural and agri-food firms would experience difficulties developing. Figure 5.14, indicates the trend of agricultural value added since 1990.

Figure 5.14: Agricultural value added (in 2005 constant \$)



Source: World Bank, WDI

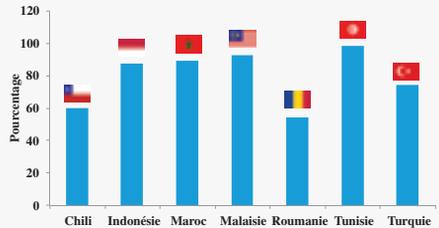
Sectors that are highly dependent on water and land resources do not seem to have been impeded in their development.

Agricultural value added has continued to increase since the early 2000s. As for the agri-food sector, the 3.1% average growth in its value added over 2000-2010 and the 13.8% increase in the number of firms over this period seem to indicate the same trend.

5.4.5 Cross Testing between Natural Resources and Infrastructure

It is important to establish the link between the absence of natural crude energy resources and the existence of an adequate energy network. Morocco must overcome a significant shortfall of crude energy resources. Figure 5.15 presents electricity generation in 2011 and the proportion that came from oil, gas and coal in relation to the reference countries. With almost 90% of electricity generation sourced from fossil fuels, Morocco is one of the countries with the highest dependency on fossil fuels. The country, therefore, appears to lag in terms of diversification of its energy production.

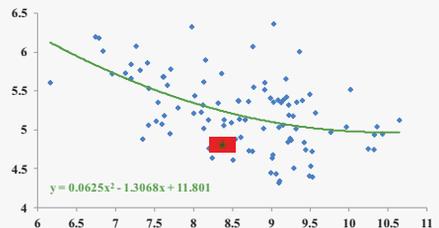
Figure 5.15: Electricity generation from oil, gas and coal (percentage of total) in 2011



Source: World Bank, WDI and the Ministry of Energy, Mines, Water and Environment

Energy consumption is lower than it should be given the country's level of activity (Figure 5.16). If future consumption increases to the expected level, the constraint will be even stronger considering the country's level of development.

Figure 5.16: Energy consumption and wealth level (log of GDP in PPP, 2005 constant \$)

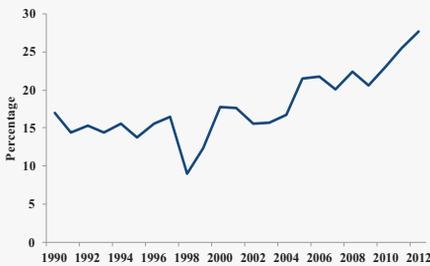


Source: World Bank, WDI

The low level of production compels the country to import in great quantities.

Figure 5.17 illustrates the trend of Moroccan oil imports as a percentage of imported goods. It appears that these imports have steadily increased since 1998.

Figure 5.17: Oil imports (in percentage of imported goods)



Source: Ministry of the Economy and Finance

However, if energy is a constraint to the development of economic activity, firms in high energy consuming sectors would experience more development difficulties than others. High energy consuming sectors do not seem to have been impeded in their development since the trend of their value added does not seem to differ from that of other sectors. However, this conclusion must be qualified by the fact that energy is highly subsidized with result that the soaring international energy prices did not have an impact on business activities. However, this effect could become significant

in future, in relation to diversification of the energy mix and establishment by the Government of the partial indexation system.

5.5 Second-Round Effects

The availability of water, arable land and energy do not seem to be a major obstacle to growth, but may potentially induce second-round effects. Indeed, the development of the economy can profoundly change the use of resources. This is particularly true if the use of new technologies is not promoted in order to better develop and sustain existing resources.

This applies in particular to water resources, where there could be trade-offs between use for consumption at the level of households, industry or agriculture. This issue arises especially if the necessary technologies are not used to develop resources (desalination, rainwater collection, reduction of runoff, etc.), improve efficiency (drip irrigation) or recycle them (treatment station).

In the case of land, certain agricultural practices and lack of technology have led to the deterioration of soil quality (salinization and erosion). The development of agricultural activities partly in response to growth and change in local demand, subsequent to economic development, could worsen this resource degradation if

land development and protection through the adoption of cutting-edge methods is not ensured.

In the case of energy, Morocco's consumption fell short of expectations, considering the level of economic development. The new energy strategy seeks to strengthen the diversification and optimization of the energy mix by promoting

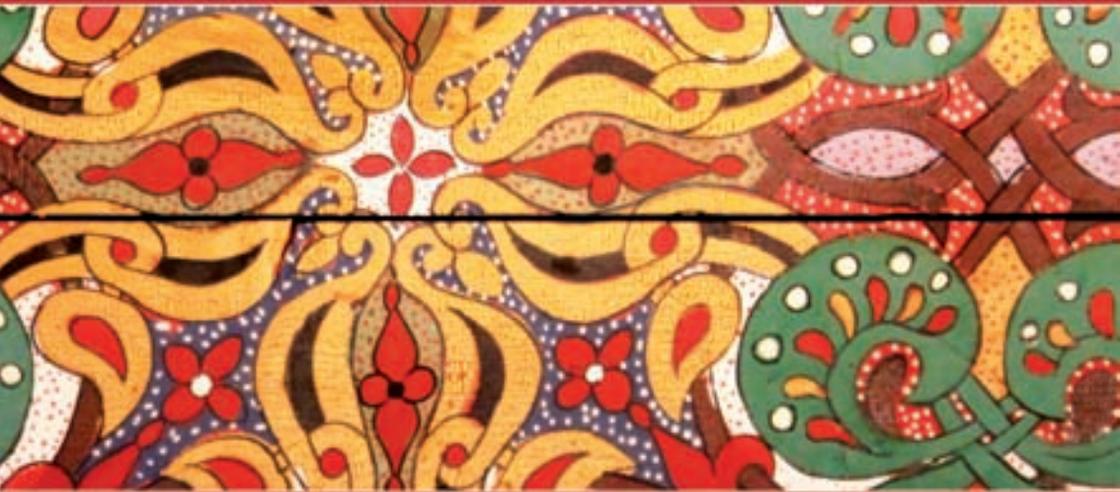
the use of alternative energies or technologies that could enhance energy efficiency.

For all these resources, the pricing policy issue must be analyzed in-depth in order to be able to address economic and social development challenges while enhancing efficiency in the use of these resources and their sustainability.



Chapter 6

Macroeconomic Risks



Chapter 6: Macroeconomic Risks

Key Messages

- Since the early 90s and up to the 2007 financial crisis, Morocco, just like other countries of the MENA region, benefitted from its geographical proximity and its integration policies with the European market. The prolonged fall in growth in Europe, the impact of the Arab Spring and the hike in world commodity prices impacted negatively on public finances, the balance of payments current account and employment, and challenged macroeconomic stability.
- The balance of payments current account balance remained within the IMF benchmark level (-2.8% of the GDP). However, the rapid increase in investments rate to GDP, which has not been offset since 2007 by a substantial increase in the savings rate, accounts for the widening financing gap.
- Despite the deterioration in the balance of payments current account, the deficit on which reached 9.7% of GDP in 2012, the level of net foreign assets remained above the commonly accepted floor level (3 months of imports) owing to the foreign currency stock accumulated in the past. However, current pressure on net foreign assets raises the issue of sustainability of the balance of payments current account deficit.
- The calculation of equilibrium real exchange rates reveals an appreciation of the real exchange rate between 1995 and 2004 and depreciation since 2005, invalidating the hypothesis of an overvaluation of the dirham.
- Despite the inter-bank market liquidity problem observed since the financial crisis, the satisfactory fundamentals of the banking sector enabled it to continue financing the Moroccan economy under good conditions.
- The banking sector gradually improved its risk management as reflected in the drop in the bad and doubtful debt ratio to the level of the main comparator countries.
- Macroeconomic balances are sustainable in the medium term, but are threatened in the short term by an unfavorable international context and growing social demand.

Introduction

Macroeconomic imbalances can be a major obstacle to growth when they generate inflationary pressures, crowding out private investment by government deficits and financial and exchange crises.

For countries with access to financial markets, the banking sector is the guarantor of macroeconomic stability. The financial sector's solidity enhances the sustainability of fundamental balances by ensuring that external shocks do not spread through the banks to the entire economy. Conversely, the financial sector's fragility exacerbates macroeconomic imbalances.

Since the end of the structural adjustment period, Morocco's performance has often been threatened by external shocks (commodity prices or international situation) and internal fragilities (weather conditions and social and institutional rigidities). Recently, the combination of slowdown of economic activity in Europe, social tensions in the wake of the Arab Spring, and the 2012 drought, led to a decline in economic growth and

a widening of budget and balance of payments current account deficits.

Nevertheless, despite the various external shocks which have occurred since the financial crisis, Morocco's experience in macroeconomic management and institutional stability place the Moroccan authorities in a favorable position to manage the risks associated with the deteriorating balances observed in the last three years.

To restore short-term macroeconomic balances, Morocco can rely on the Precautionary and Liquidity Line granted by the IMF, which enhances the credibility of the country's determination to undertake reforms, particularly in the area of taxation and compensation⁵².

6.1 Balance of Payments Current Account Imbalances

Moroccan authorities have demonstrated their ability, in the long run, to restore the macroeconomic balances. However, even though domestic growth components were controlled, the sources of external vulnerability for the Moroccan economy remain intact.

⁵² It should be stated that the subsidy policy reform was initiated since mid-2013.

6.1.1 External Macroeconomic Risk Factors⁵³

The degree of openness of the Moroccan economy⁵⁴ (86% in 2012) exceeds that of all Lower Middle-Income Countries (LMIC).

Because of this, Morocco is fairly highly exposed to international income fluctuations.

Despite outstanding performances in certain exportable products for almost ten years, foreign trade remains a weak point of the Moroccan economy. In the longer term, foreign trade trends show a strengthening of Morocco's export position, alongside high energy dependency on the import side.

The share of consumer (textiles) and food products in exports dropped sharply during the first decade of the 2000s in favor of semi-processed products, fertilizers, phosphoric acids and, to a lesser extent, industrial equipment products. This trend reflects a change in Morocco's industrialization process. However, the geographical concentration of exports in South European countries heightens the risk of exposure to demand shocks.

Regarding imports (more than half of which originate from Europe), structural dependency on fixed imports affects the

sustainable restoration of the balance of payments current account balance.

Indeed, energy imports since 2009 and the rapid increase in food imports since 2007 affect the trade balance because of higher commodity prices.

Consequently, the size of the energy and food import bills is a constraint to the exchange rate policy which must avoid the inflationary risk linked to a sharp depreciation of the dirham.

6.1.2 Current Account Balance Trend and Financing Gap

The balance of payments current account imbalance reflects excess aggregate demand due to insufficient savings in relation to investment. Since the early nineties, Morocco has reduced its current account deficits, almost balanced them between 1996 and 2000, and generated surpluses between 2001 and 2006, especially as a result of privatization revenue, massive inflows of migrant remittances, and tourism revenue. The trend was, however, reversed as from 2004 and the Moroccan economy's resilience to shocks was severely tested since 2009 and, again, in the years 2011 and 2012.

In the longer term, with the exception of the 2010-2012 period, the balance of

⁵³ See annex 6.1 for more details.

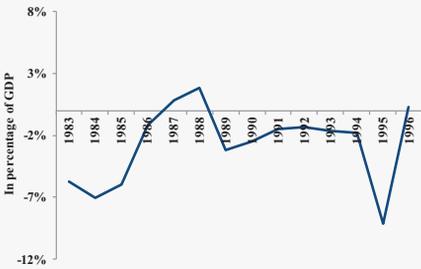
⁵⁴ $(X+M)/GDP$.

payments current account balance was maintained (most of the time) within the IMF benchmark level of -2.8% of GDP.

Two distinct regimes, characterized by almost symmetrical trends, underpinned economic momentum between 1980 and 2012.

Between 1980 and 1995 (figure 6.1), the accumulation of net foreign assets coincided with the implementation of sector and structural reforms.

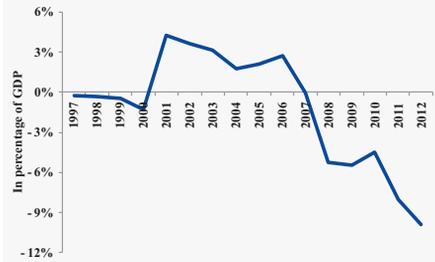
Figure 6.1: Current account as percentage of GDP (1983-1996)



Source: Exchange Office

Since 1996 (Figure 6.2), the country balanced its current account and even generated surpluses as a result of privatization revenue, massive inflows of migrant remittances, and tourism revenue and then with growth acceleration, as a result of trade liberalization and foreign direct investment inflows.

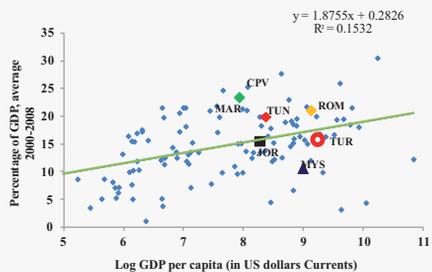
Figure 6.2: Current account as percentage of GDP (1997-2012)



Source: Exchange Office

The rapid increase in investments in GDP, unaccompanied by a substantial increase in savings, accounts for the widening financing gap. In 2012, the investment rate was identical to that of Romania and Indonesia (31.7%) (Figure 6.3).

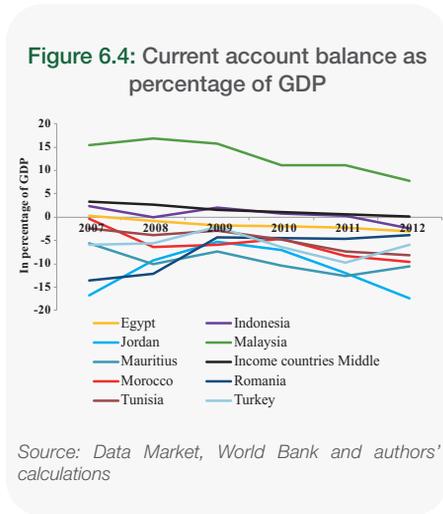
Figure 6.3: Investment (percentage of GDP) relative to GDP per capita



Source: WDI and authors' calculations

Between 2004 and 2011, FDI accounted for about 2.8% of GDP. Over the same period, the average investment / savings gap was 5.9%. The external financing gap, therefore, stood at about 3.1% of GDP.

Over the short term, the balance of payments current account deficit deteriorated rapidly from 2007 with the decline in global activity following the financial crisis (Figure 6.4).



However, from a longer-term perspective and compared to the comparator countries, Morocco's financing requirements have been fairly stable, thanks to the implementation of counter-cyclical policies (accumulation of net foreign assets during the acceleration phase).

6.1.3 Trend in Net Foreign Assets

In the case of Morocco, the external position is a key factor in assessing macroeconomic risk. The trend in net foreign assets is a preferred indicator for analyzing the insolvency and financial risk of open economies⁵⁵.

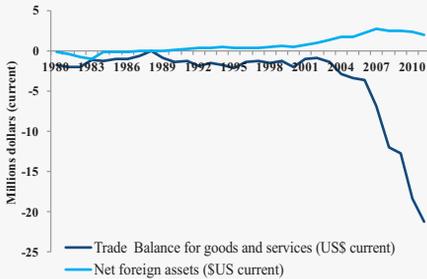
The macroeconomic insolvency risk can result from weakness of the banking sector, exposure to exchange risk (depreciation of foreign assets) or interest-rate risk exposure (ill-adapted maturity structure of net borrowings). It can also be generated by an accumulation of net foreign assets underpinned by excessive borrowing to offset the imbalance on the balance of payments current account.

Despite the widening of the balance of payments current account deficit to 9.7% of GDP in 2012, the level of net foreign assets in Morocco remained above the commonly accepted floor level (3 months of imports) owing to the foreign currency stock accumulated in the past (Figure 6.5). In 2011 and 2012, a succession of negative shocks, falling exports, a higher energy bill, lower migrant remittances and a drop in FDI accelerated the fall in net foreign assets. However, their maintenance at the equivalent of 4.5 months of imports of goods was

⁵⁵ Lane, Philip R., and Gian Maria Milesi-Ferretti, / Lehmann, Alexander, / Mathisen, Johan, and Anthony J. Pellechio.

made possible as a result of external borrowing.

Figure 6.5: Comparative trends of net foreign assets and the balance of trade of goods and services



Source: Data Market, IMF and authors' calculations

The current pressure on net foreign assets raises the issue of sustainability of the current account deficit and the possible overvaluation of the real effective exchange rate.

6.1.4 Sustainability of the Current Account Deficit

Three complementary approaches were used to assess the balance of payments current account imbalance⁵⁶, namely, the analysis of sustainability of the current

account deficit, identification of the current account equation and determination of the equilibrium real effective exchange rate (see Annex 6.2).

This analysis shows that that the existing dynamics of the current account balance, net foreign assets and the real effective exchange rate do not reveal any structural imbalances in relation to long-term balances (see Annex 6.3).

6.2 Sound Public Finances

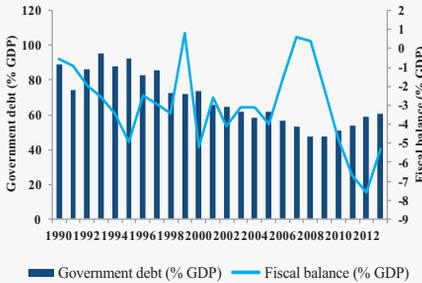
Morocco's public finances are built on a solid foundation despite recent difficulties resulting mainly from the world oil price hike and social dialogue which led to a widening of the fiscal deficit. The improvement of Morocco's public finance situation will depend on fiscal reform, wage bill control as well as pensions and compensation reform.

6.2.1 Public Debt Sustainability

Active debt management combined with the control of fundamental balances resulted in a debt rate of 59.1% of GDP in 2012 compared to 72.7% in 1999 (Figure 6.6).

⁵⁶ External Balance Assessment (EBA) Methodology: Technical Background, Prepared by Staff of the IMF's Research Department 1, June 25, 2013.

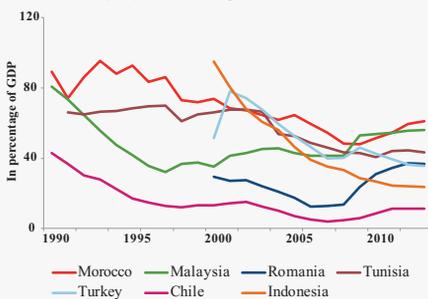
Figure 6.6: Budget deficits and public debts



Source: World Bank

However, it should be noted that public debt is already relatively high in relation to the comparator countries and that any increase would endanger inclusive and sustainable growth (Figure 6.7).

Figure 6.7: Gross public debt (in percentage of GDP)



Source: World Bank

With a widening fiscal deficit since 2010 and rising debt ratio, the issue of public debt sustainability would have arisen if commitments taken within the framework of establishing the IMF Precautionary and Liquidity Line were not fulfilled.

According to the IMF's forward-looking Debt Sustainability Analysis for Morocco, the debt ratio is expected to fall to 56.9% in 2017⁵⁷.

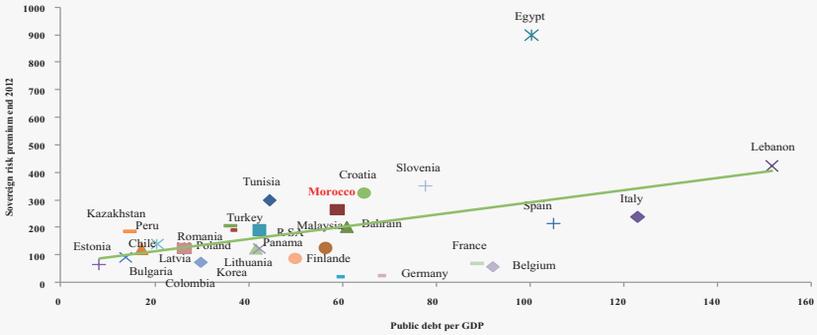
6.2.2 Assessment by Markets

Despite guaranteed access to the global market, the Credit Default Swap (CDS) sovereign premium increased sharply at the end of 2012, thus leading to a deterioration of public finances.

Nevertheless, Morocco still had a favorable quotation compared to Tunisia and Egypt. Figure 6.8 highlights the relationship between the CDS premium at 5 years and the debt/GDP ratio. Except for advanced countries, the premium/debt relationship is logically on the rise. The grey scatter dots include middle-income countries with a debt level below 50% and a premium below that of Morocco. In late 2012, Morocco benefitted from an "overvaluation", with a premium level slightly above the group average, despite a considerably higher debt level.

⁵⁷ Calculated from the formula $d = d - 1 [(r - p(1+g) - g + ae(1+r))/(1+g+p+gp)]$ where d is the debt/GDP ratio; r = apparent interest rate of the debt; p = inflation rate; g = GDP growth rate in volume; a = share of the debt in foreign currency; and e = depreciation rate of the nominal exchange rate (number of dirhams for a USD).

Figure 6.8: Sovereign risk premium and debt in late 2012

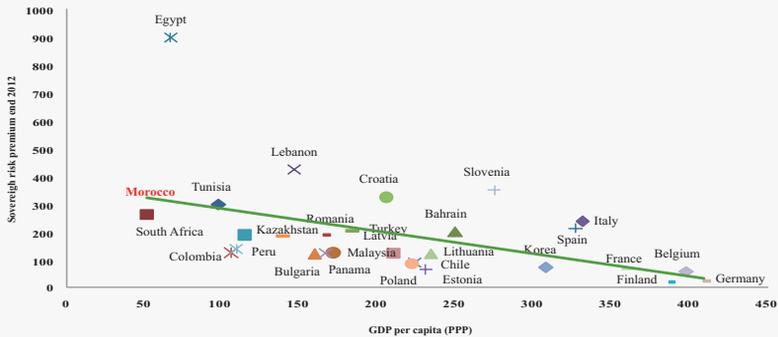


Source: Market Data

In addition, if GDP/capita is taken into account, Morocco is the only country among

LMICs to have an active CDS market and a relatively favorable quotation (figure 6.9).

Figure 6.9: Sovereign debt premium and GDP per capita



Source: Market Data and authors' calculations

6.3 The Banking Sector

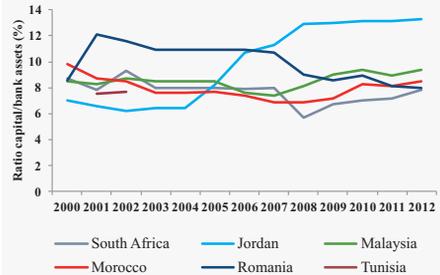
Despite the liquidity problem on the inter-bank market noted since the financial crisis, the fundamentals of the banking sector enabled it to continue financing the Moroccan economy in favorable conditions.

In June 2012, the ratio of capital to the weighted average of risky assets was 12.2%. This ratio is comparable to that of France, but lower than that of Germany, Turkey and Jordan. However, debts classified as bad and doubtful account only for 5% of total loans. The limited integration of banks into the international financial system protected them from the contagion effects of the financial crisis.

6.3.1 Bank Capitalization

Bank capitalization is lower than that of many comparator countries, but in compliance with the Basel II Prudential Standards (8%) (figure 6.10).

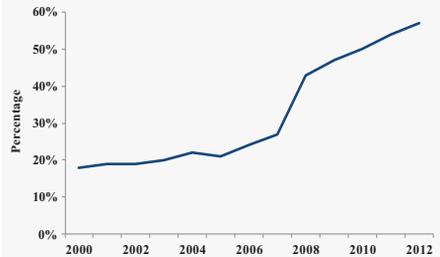
Figure 6.10: Bank capitalization



Source: WDI

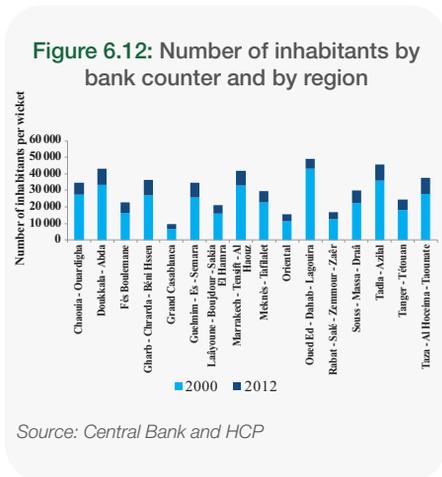
The rapid growth in the banking penetration rate is a positive indicator of the Moroccan economy's modernization (figure 6.11).

Figure 6.11: Banking penetration rate



Source: Central Bank and HCP

Between 2000 and 2012, the banking penetration rate rose in all regions and the reduction in the number of people per bank counter continued during the same period in most regions (Figure 6.12).



6.3.2 Return on Capital

In addition to bank capitalization, the key issues are those of the return on capital invested in the financial sector and bank governance, particularly in the area of risk management. The return on capital of Moroccan banks was 10% in 2012 compared to 13% in Turkey, 15% in Malaysia and 1.5% in Romania. The average return on Moroccan bank assets is also low, but stable since the early 2000s decade. It is lower than those of Malaysia and Turkey (Figure 6.13).



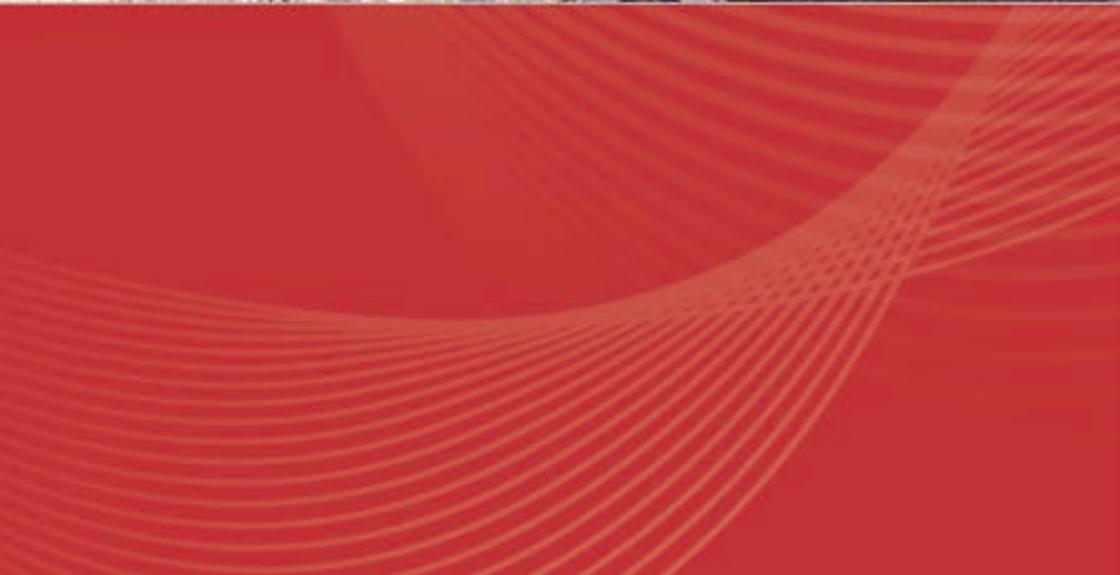
6.3.3 Risk Management

The banking sector has gradually improved its risk management. The ratio of BDDs has decreased to the level of the main comparator countries. In June 2013, the BDD rate was 5%, with, however, a wide sector disparities. It is almost 10% in agriculture, 9.3% in the manufacturing industry, 11% in the hotel trade, 4.8% for households, but only 0.3% in the mining industries. In addition, the increase in provisions for doubtful debts, which rose to 68% in 2012, enhances bank credibility. These efforts were made in a context of tighter margins.



Chapter 7

Microeconomic Risks



Chapter 7: Microeconomic Risks

Key Messages

The Judicial System

- During the last decade, Morocco embarked on a process of modernizing and enhancing its legal and institutional frameworks. However, judicial system-related issues are always raised as constraining for all categories of firms.
- The Moroccan judicial system is considered extremely cumbersome in terms of contract execution (very long timeframes and very high number of procedures), and insolvency settlement costs are also considered high.
- In a bid to bypass the complexity of the judicial system in Morocco and propose an alternative method of settling disputes, a new Law on Arbitration and Mediation (national and international) was enacted in February 2008. However, since its enactment, the use of trade arbitration has not yet been fully successful.
- The Moroccan authorities are fully aware of the flaws of the judicial system. Considerable efforts have been made to change its negative perception by investors.
- The reforms already undertaken have undoubtedly helped to address several issues but challenges remain. The Moroccan authorities are continuing their commitments to the modernization of the judicial system through, among other things, the simplification of procedures and the establishment of new, specialized courts.
- The acceleration of structural reforms in the judicial sector is essential to promote private investment and build investor confidence.

Land Tenure

- Land Tenure is a complex issue in Morocco. Land ownership is subject to a dual system, which makes land transactions very difficult, especially under the traditional system governed by the principles of Muslim law and local customs. Similarly, land tenure in Morocco is often criticized for the excessive diversity of its statutes and oversight authorities.
- In Morocco, land access is a constraint which is highly dependent on land availability in the regions attractive for investment. In addition to the issue of land availability, high prices, speculation and the very long timeframes (time required to lease land) are considered as additional obstacles.
- The creation of industrial zones has, to some extent, mitigated the problem of land access but urbanistic constraints remain.

- Land tenure is considered as major obstacles to private investment in Morocco. Despite the efforts made, the problem of land access could discourage national and foreign investors. It is, therefore, urgent to reform and modernize certain aspects of this sector's regulatory and institutional framework.

The Tax System

- The tax system has largely been used by Moroccan authorities as an economic incentive. However, the tax burden does not weigh equally on economic operators (problem of fiscal distortions).
- In practice, Moroccan taxation has been permanently under reform since the mid-80s. However, changes made by various budget laws have made the tax system less transparent and complex.
- For several years now, the significant improvement in tax administration quality (in terms of timeframes and number of taxes paid per year) and the modernization of its services has helped to simplify procedures and reduce tax payment timeframes.
- Despite the efforts made to reduce the tax rate, Moroccan firms operating in the formal sector still feel that these rates are relatively high and impede the expansion of their activities.

Governance, Corruption and Transparency

- During the last decade, Morocco embarked on a process of strengthening good governance practices. However, recent international reports in this area emphasize that governance and anti-corruption perception indicators were among the lowest. Consequently, the improvement of governance remains a major challenge for the Moroccan authorities. In this regard, several measures were adopted [adoption of the 2010-12 action plan, establishment of the Central Authority for the Prevention of Corruption (ICPC) which became a constitutional body in 2011, and the establishment of the Anti-Corruption Inter-ministerial Commission (CILCC)].
- The contract values of Moroccan firms are not seriously affected by corruption, and problems of governance and corruption within the administration do not seem to be a major constraint to the development of their activities.

Labor Market

- International indicators show that Morocco has a relatively rigid Labor Code in relation to the comparator countries, which results in implicitly high costs.

- In relation to the comparator countries, the financial cost of labor in Morocco is relatively high. In addition, the minimum wage in Morocco is close to the average productivity per worker, which shows that Morocco promotes unskilled labor, compared to its level of income per capita.
- Moroccan entrepreneurs feel that labor legislation is less problematic than access to financing or bad governance. However, some of them are not prepared to comply with this legislation, which is an explanation for the relatively high number of strikes and size of the informal sector.

Trade Barriers

- Aware of the importance of trade openness in its development process, Morocco has, for many years now, embarked on important reforms to simplify trade procedures.
- Morocco has made great efforts in terms of openness: since the late 1990s, many trade agreements have been signed with various partners resulting in a general drop in tariffs, which was even sharper for industrial products.
- Morocco's trade policy also concerned the reduction in the number of non-tariff measures (NTM) and their harmonization with international standards.
- Morocco's overall trade openness has improved greatly and trade barriers do not impede the country's growth. However, the increasing number of trade agreements might complicate Morocco's trade regime.

Introduction

Weak ownership of the return on economic activity in a given country is often due to the failure of government policies and institutions. Indeed, institutional weaknesses create risks and distortions at the microeconomic level, reduce the return on private investments and slow down economic growth.

To address these weaknesses, it is essential to establish adequate microeconomic policies and efficient institutions. These policies will foster the establishment of a reliable system of property rights, transparent and efficient regulations, a fair, modern and rapid judicial system in terms of the enforcement of judgements, relatively flexible taxation rules without distortions, easy access to land, and adequate protection against unfair trade practices and situations of monopolistic competition.

Within the framework of the growth diagnostic, microeconomic distortions and weak institutions can be a major constraint to economic growth and impede private investment. This chapter presents an empirical analysis, which shows that weaknesses in certain microeconomic policies and institutional failures are major constraints to growth in Morocco. The sluggish judicial system, including the enforcement of court rulings, increasingly

difficult access to land and governance issues represent a major challenge which must be addressed.

7.1 The Judicial System

7.1.1 Situation and Challenges

The judicial system, in addition to its conflict resolution role, can be a very important factor for economic development and private investment promotion. Indeed, investor protection partly depends on the efficiency of the judicial system and its ability to pass impartial judgments in accordance with the law, ensure compliance with agreements and contracts and see to the reliable and transparent enforcement of laws in settling trade conflicts. By guaranteeing the freedom of financial and economic transactions, ensuring investors' rights and promoting a climate of trust, the judicial system could encourage private investors and promote economic activities.

During the last decade, Morocco embarked on a process of modernizing its body of laws and strengthening its institutional framework, through the adoption of a series of reforms culminating in the amendment of several laws (Family Code, Criminal Code, Labor Code, Nationality Code, Electoral Code, Communal Charter, etc.) and the establishment of various institutions, but whose mechanisms of action are still to be perfected (especially regarding

the judicial, control, coordination, monitoring and evaluation bodies).

This process culminated in July 2013 in the Judicial Reform Charter, which is a significant step towards improving governance in public action. This charter seeks to consolidate the independence of the judiciary, moralize the justice system, strengthen the protection of human rights and freedoms, improve the efficiency and effectiveness of the judicial apparatus, build the judicial system's institutional capacities and modernize the administration.

According to the Global Integrity Report, Morocco was ranked in the "very low" category with a score of 50 out of 100 for the Rule of Law criterion (Table 7.1.1). This score is not encouraging for investors and remains lower than that of the comparator countries (57 for Tunisia, 80 for Turkey, 82 for Romania and 78 for Chile). However, it should be noted that this 2010 ranking did not yet reflect the reforms implemented to modernize and strengthen the judicial system.

Table 7.1.1: Global Integrity Score on anti-corruption and the Rule of law

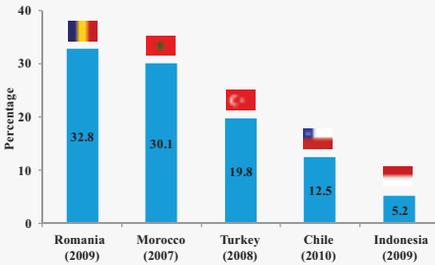
Anti-corruption and Rule of Law	60	Very weak
Anti-Corruption Law	100	Very high
Anti-Corruption Agency	72	Moderate
Rule of Law	50	Very weak
Law Enforcement	63	Weak

Source: *Global Integrity, 2010, Notes on a scale of 0 to 100.*

The last World Justice 2014 ranking shows that Morocco's judicial system has evolved as a result of the reforms engaged in for some years now. Indeed, Morocco is ranked 52nd out of 99 countries with an overall score of 0.51. This ranking reflects the improvements made with ongoing reforms in the public order and security sectors (ranked 44th globally) and regulatory enforcement (36th and 3rd globally among countries of the region). However, despite the progress made, this ranking remains lower than that of Chile (21st with a 0.68 score), Malaysia (35th) or Tunisia (41st) globally. Major challenges remain in the areas of protection of fundamental rights (84th out of 99) and control of corruption (62nd). The civil justice system is ranked 51st overall and the criminal justice system 81st, mainly due to the violations of due process, harsh conditions in correctional facilities and political interference. This ranking, while reflecting an improvement following reforms, shows that the Moroccan judicial system still suffers from certain problems concerning the enforcement and interpretation of regulations and emphasizes the major challenges to be faced.

The results of the World Bank "Enterprise Survey, 2007" confirm this problem and justify the reforms undertaken by Moroccan authorities to address it. Indeed, in 2007, 30.1% of Moroccan firms declared, during this survey, that the judicial system is a major obstacle to their activity. This rate is significantly higher than that observed in Turkey, Chile and Indonesia (Figure 7.1.1).

Figure 7.1.1: Percentage of firms identifying the judicial system as a binding constraint (Morocco and comparable countries)

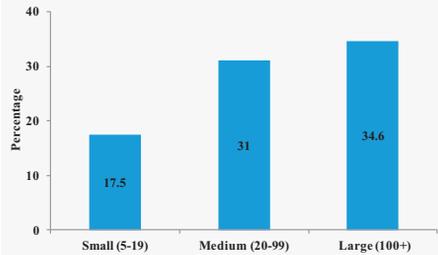


Source: Enterprise Survey, World Bank

During this survey, all categories of Moroccan firms (of various sizes and operating in different sectors) stressed the constraining nature of the Moroccan judicial system. Thus, 34.6% of large Moroccan firms and 31% of medium firms identified the judicial system as a major constraint (Figure 7.1.2). These results are confirmed in a study on the business climate and investment policy in Morocco conducted in 2008 by UNCTAD⁵⁸. This study highlights issues linked to the credibility of the judicial institution among investors and the inability of magistrates and representatives of the law to handle commercial matters, as very constraining for investment promotion in Morocco. It emphasizes that 30% of firms consider the settlement of disputes by commercial courts as a major obstacle to their

economic activity. In addition, foreign firms established in Morocco are more sensitive to this problem: 60% of firms (large, medium and small) consider justice and judicial uncertainty as the second obstacle to business, after taxation. The results of this survey explained the need and urgency to reform the Moroccan judicial system.

Figure 7.1.2: Percentage of Moroccan firms identifying the judicial system as a binding constraint



Source: Enterprise Survey, World Bank

7.1.2 Type 1 Test: High Cost of Justice

The Moroccan judicial system has always been considered as being very complex in the area of contract execution. Thus, investors have often indicated that Moroccan justice is slow (procedure timeframes, adjournment of hearings), uncertain (difficulty in getting court rulings enforced) and unpredictable (corruption,

⁵⁸ UNCTAD, 2008.

particularly at the level of legal experts⁵⁹). In this regard, the number of contract execution procedures is very high in Morocco (40) compared to Turkey, Malaysia, Chile and Romania. This observation is also valid for contract execution timeframes: in Morocco, the time required to execute a contract is 510 days, which is very high compared to Turkey, Malaysia or again Chile (table 7.1.2).

Table 7.1.2: Execution of contracts: number of procedures, cost and time frame

	Time frame (days)	Cost (% of the debt)	Procedures (number)
Chile	480	28.6	36
Indonesia	498	139.4	40
Malaysia	425	27.5	29
Morocco	510	25.2	40
Romania	512	28.9	32
Tunisia	565	21.8	39
Turkey	420	24.9	36

Source: *Doing Business, 2014*

This same observation is applicable for insolvency settlement costs, which are considered very high in Morocco. The

settlement cost for insolvency in Morocco is, indeed, high (18% of the asset value) compared to the comparator countries (average of 13.4%) (Table 7.1.3).

Table 7.1.3: Settlement of outstanding debts: timeframe, cost and recovery rate

	Timeframe (years)	Cost (% of the asset value)	Recovery rate (cents per dollar)
Chile	3.2	15	29.1
Indonesia	4.5	18	17.9
Malaysia	1.5	10	48.9
Morocco	1.8	18	38.3
Romania	3.3	11	30
Tunisia	1.3	7	52
Turkey	3.3	15	22.3

Source: *Doing Business, 2014*

It should also be noted that Morocco has 3724 magistrates⁶⁰ for a population of 33 million inhabitants, representing a ratio of 1.1 magistrate per 10,000 inhabitants. The number of magistrates remains inadequate compared to the number of cases recorded and the comparator countries. In 2012, this ratio was 1.8 magistrate to 10,000 inhabitants in Tunisia and 2 magistrates to 10,000 inhabitants in Romania.

⁵⁹ Legal experts are specially empowered professionals, responsible for giving judges a technical opinion on facts in order to make clarifications on a case. These are specialists of various disciplines. However, their opinions are not binding on the judges who remain free in their assessment.

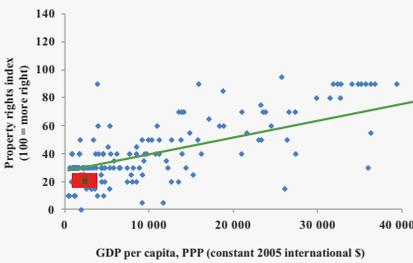
⁶⁰ Data from the Ministry of Justice, Morocco.

<http://www.justice.gov.ma/ar/Statistiques/Categorie/?Categorie=12&Menu=2>

7.1.3 Type 2 Test: Relationship between Judicial System Quality and GDP per capita

Morocco is highly ranked in terms of protection of property rights (overall indicator for the protection of private property rights). The property rights index in Morocco is consistent with its level of GDP per capita (Figure 7.1.3).

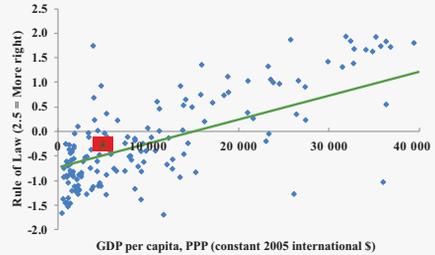
Figure 7.1.3: Property right index and GDP per capita



Source: World Governance Indicators, 2014

This observation also applies for the Rule of Law index⁶¹. Morocco is ranked highly in relation to its GDP per capita (Figure 7.1.4). This shows the existence of the Rule of law and regulations.

Figure 7.1.4: Rule of law and GDP per capita



Source: World Governance Indicators, 2014

7.1.4 Type 3 Test: By-passing the Constraints

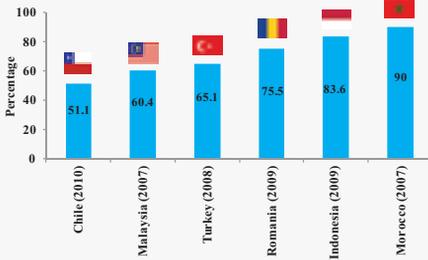
Slow judicial procedures (too many texts, various interpretations) and problems in implementing procedures and decisions compel Moroccan firms to avoid using the judicial system.

In the case of the financial sector, for example, in order to bypass this constraint of a slow judicial system, banks prefer to insist on very high guarantees on loans granted: 90% of loans granted by Moroccan

⁶¹ This is a perception indicator on people's trust in the society's functioning rules, the protection of property rights, the police, the justice system, and the protection of citizens against acts of violence and criminal activities.

banks are subject to guarantees (Figure 7.1.5). This rate is significantly higher than those of the reference countries.

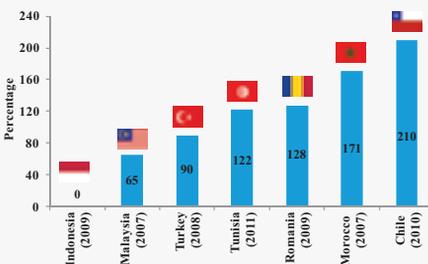
Figure 7.1.5: Proportion of loans requiring a guarantee



Source: World Bank Surveys

These guarantees, according to a World Bank business survey (2006-2009), average 171% of the loan amount (Figure 7.1.6).

Figure 7.1.6: Guarantee value necessary for a loan (percentage of loan amount)



Source: World Bank Surveys

In a bid to bypass judicial system red tape in Morocco and propose an alternative method of settling disputes, the new Law on Arbitration and Mediation (national and international)⁶² was enacted in February 2008. This law encourages the use of consensual dispute settlement procedures, particularly in trade arbitration. However, since its adoption, trade arbitration is little used.

7.2 Land Tenure

7.2.1 Situation and Challenges

In Morocco, land remains a key determinant of domestic and foreign investment and land tenure plays a predominant role in boosting economic activity (See Annex 7.1).

Land ownership in Morocco is subject to a dual system, due to the coexistence of a "traditional" system governed by Muslim law principles and local customs, and a "modern" land registration system (which dates back to the year 1913). The latter system has legal, economic and social benefits. However, because of its optional nature, it is not sufficiently widespread.

⁶² See sections 306 and the following ones of the Criminal Procedure Code (CPC).

The predominance of the traditional system has made land transactions very difficult.

Indeed, this system, characterized by lack of

transparency, does not guarantee transaction security, hence the many disputes among local residents and credit access difficulties.

Box 7.2.1: Typology of Public Land in Morocco

- State-owned public land is mainly under the oversight of the Ministry of Equipment, Transport and Logistics although it may be occupied and managed by public enterprises (such as transport enterprises) and local authorities;
- State-owned private land is under the oversight of the Department of State Lands at the Ministry of Economy and Finance; this land may also be occupied and managed by various public organizations;
- Forest land is also under the oversight of the Department of State Lands, but managed by the High Commission for Water and Forests;
- “Habous” lands, under the oversight of the Ministry of Habous and Islamic Affairs;
- “Guich” land, under the oversight of the Ministry of Interior; and
- Collective lands, under the oversight of the Ministry of Interior.

Another land-related issue often raised by Moroccan firms, is the excessive diversity of land statutes, systems and oversight authorities. Some land classified as “agricultural land” cannot be subject to commercial transactions (sale or lease) outside its agricultural purpose⁶³. In addition, long and difficult negotiations and procedures are required to change this system for the purposes of developing an industrial area.

Land access is a constraint which is heavily dependent on land availability in the regions attractive for investment.

Indeed, according to the Enterprise Survey on the investment climate, this constraint is more serious in regions such as Fez, Tangier, Tetouan and Casablanca (Figure 7.2.1). In Tangier and Tetouan, for instance, 62% of firms consider land access as a major or very binding constraint to their business. This observation was confirmed during

⁶³ World Bank, Ministry of Industry and Trade of Morocco, 2005.

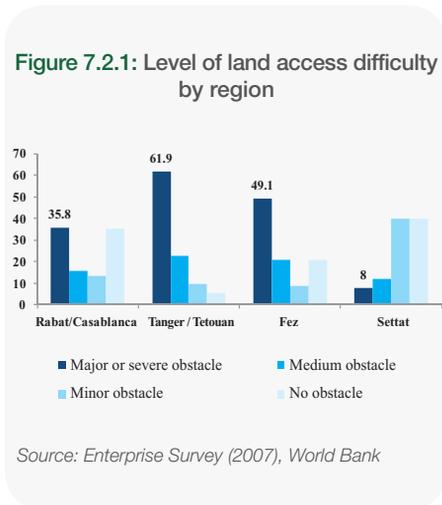
consultations with the private sector in the various regions of Morocco as part of this growth diagnostic. It is also observed that firms occupying leased land seem to be those that express the greatest need to acquire it, probably because land can be used as a guarantee for a bank loan.

ensure the growth of their activities. This problem also arises for medium (37%) and small (42%) firms.

Table 7.2.1: Level of land access difficulty by business size

	Not an obstacle	Minor obstacle	Average obstacle	Major or very severe obstacle
Small ≥ 5 and ≤ 19	35	11	13	42
Medium $=20$ and ≤ 99	31	13	20	37
Big ≥ 100	23	16	18	43

Source: Enterprise Survey (2007), World Bank



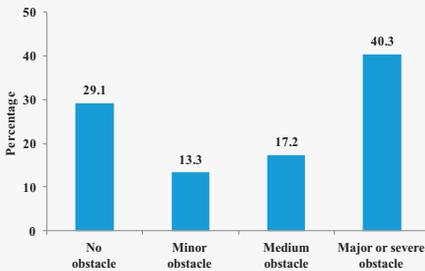
This degree of difficulty also depends on the firm's size. Indeed, large firms (43%) are most likely to consider land access as a major or severe constraint to the expansion of their activities (Table 7.2.1). This can be explained by the fact that large and often exporting firms are generally those most often seeking to make extension plans and

In addition to the issue of industrial land, Morocco faces a problem of agricultural land. Indeed, land structures in Morocco are characterized by excessive fragmentation, their small size and the significant joint ownership that characterizes the majority of farms, in addition to the multiplicity of land statutes. More than 70% of farms have surface areas below 5 ha and are composed on average of 6.4 plots, which, to a certain extent, explains low plot yields in terms of production. This situation would appear to persist despite the special attention paid by the Moroccan Authorities to agricultural land especially at the legislative level.

7.2.2 High Cost and Perception of Firms

For Moroccan firms, access to industrial land is very difficult and constitutes a major constraint to the development of their activities. Thus, according to the World Bank Enterprise Survey (2007), more than 40% of Moroccan firms consider land access as a major or very severe obstacle (Figure 7.2.2). Morocco comes first in terms of level of dissatisfaction compared to the reference countries: in Romania and Turkey, this rate is only 9% and 7% respectively.

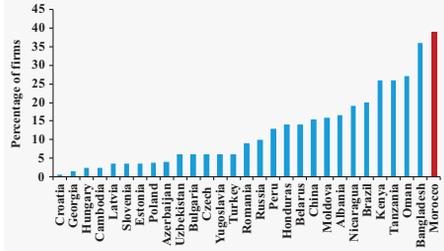
Figure 7.2.2: Level of land access difficulty (Morocco 2007)



Source: Enterprise Survey (2007), World Bank

Even when compared to a larger group of countries using the results of surveys on the investment climate, Morocco has the highest rate (Figure 7.2.3).

Figure 7.2.3: Industrial land access constraint: international comparisons

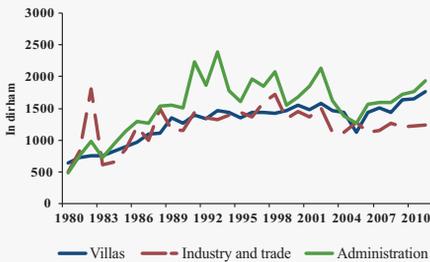


Source: Surveys on the investment climate, various countries

Despite the difficult access to industrial land, the prices of this land are not particularly high and remain lower than those of land reserved for the construction of property. In 2011, the price per square metre of industrial land (MAD 1,243) was lower than the price per square metre for land reserved for property construction (MAD 1,758) and the prices of industrial land evolve less rapidly than those of land intended for construction (Figure 7.2.4). These relatively low price levels can be explained by the fact that land availability for industry in Morocco is dominated by public land that the Government sells at subsidized prices. The private market for vast land surfaces exists but it is small in size. This dual market for industrial land, characteristic of Morocco, led to a situation whereby the country did not supply land that meets the

needs of industrial development. During consultations with the private sector and the Government of Morocco, several potential reasons were given to explain the reasons for this problem of the mismatch between the quality of industrial land and the needs of firms. These are due mainly to land development decisions⁶⁴ and the configuration and/or location of areas that do not match the real needs of investors⁶⁵, the land administration's weak capacity and lack of coordination.

Figure 7.2.4: Trend of prices per square meter⁶⁶

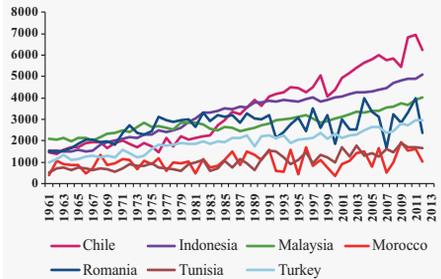


Source: HCP 2013

For agricultural land, low crop yields are indicative of the fact that land tenure

is an obstacle to investment. Indeed, a comparison of the yields of agricultural land in terms of cereal production⁶⁷ (Figure 7.2.5) between Morocco and the comparator countries shows that the productivity of agricultural plots remained low in Morocco over the 1961-2012 period.

Figure 7.2.5: Cereal yields in Morocco (1961-2012)



Source: Development Indicators, World Bank

The low level of investment linked to agricultural land in Morocco is limited by land insecurity in the rural areas as well as issues of joint ownership and fragmentation⁶⁸. Land insecurity in rural areas in Morocco has often been exacerbated by the low level of registration,

⁶⁴ Real needs for industrial development include water access, electricity access, telephone network access, provision of security services, etc.

⁶⁵ Configuration refers to the physical characteristics of the developed land (including location).

⁶⁶ Real estate prices are not included in this comparison because real estate can also be an industrial or commercial and residential asset.

⁶⁷ It should be noted that cereal farming occupies more than 70% of arable land. Morocco is a cereal-producing country, whereas it has comparative advantage in olive production which takes 5 to 7 years to reach maturity and requires heavy investments (plantation projects).

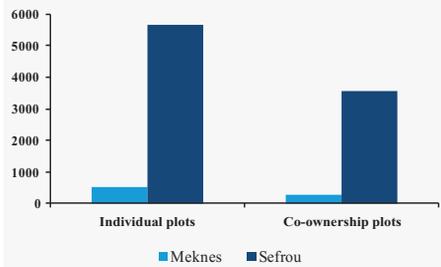
⁶⁸ World Bank, 2007. Lazarev 2012, Consultations with the private sector and the Government 2014.

which explains the unwillingness of tenant farmers of collective land, for instance, to make land improvements or undertake construction or plantation projects⁶⁹. On the other hand, private title holders have more freedom in their decision-making as concerns the production strategy to be adopted, since they have greater security over their land. Currently, according to several specialists, less than 10% of agricultural land is registered.

Similarly, the family land inheritance system has resulted in agricultural plots being greatly fragmented and remaining indivisible after several generations⁷⁰.

This joint ownership does not encourage investment in plot improvement by the co-owners. In this regard, and following the World Bank survey conducted in Meknès and Séfrou, this result was confirmed. Indeed, in the two regions, the survey showed that plot-related investment was almost twice that for individual plots than for plots under joint ownership (figure 7.2.6).

Figure 7.2.6: Investment and joint ownership



Source: World Bank (2007)

7.2.3 Type 3 Test: By-passing the Constraint

Diminishing state-owned land reserves in urban areas are considered to be a limiting factor to the availability of industrial land intended for investment.

To address this issue and help firms to bypass the difficulty in acquiring industrial areas that meet their needs, the Moroccan government turned its efforts

⁶⁹ World Bank, 2007.

⁷⁰ Ibid.

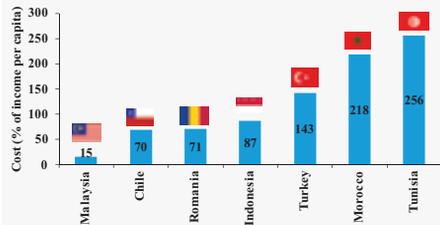
towards establishing industrial zones, which, to a certain extent, mitigated this problem, but which at times created urban development constraints⁷¹. These industrial zones were developed mainly in accordance with the laws and regulations in force and were supposed to be equipped with basic infrastructure and equipment essential for the smooth running of industrial units such as water, electricity and telephone network access, the provision of security services, etc.

However, the industrial zones often suffered from lack of planning and coordination – in terms of regional development and land occupation – and regulation in the development, marketing and management of industrial areas. These problems very often resulted in incomplete infrastructure and low occupancy rates⁷². During consultations, private entrepreneurs, particularly industrialists operating in the industrial zones of the National Industrial Zone Development Program (PNAZI), also mentioned that they were not adequately involved in the development and management of these zones. For instance, in the South, the quality of infrastructure and equipment poses a problem and not

land availability or price. On the contrary, in Casablanca or Rabat, the price of land and its availability are the major problems.

The land administration's inefficiency and lack of coordination is also reflected in the high costs for obtaining permits and longer timeframes to lease industrial land. Thus, compared with the reference countries, the cost of obtaining a building permit in Morocco is quite high and represents up to 218% of income per capita (except for Tunisia where the cost reaches 256% of income per capita) (Figure 7.2.7)⁷³.

Figure 7.2.7: Obtaining a building permit: Cost (percentage of income per capita)



Source: *Doing Business, 2014*

⁷¹ UNCTAD 2008.

⁷² As a result of the plethora of actors responsible for land management, it suffers, as do many other sectors, from a coordination problem.

⁷³ Industrial land in Morocco is either leased or sold.

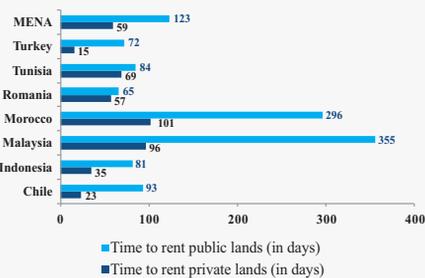
The above observation is confirmed by comparing data on the time required to lease land in Morocco and the reference countries. World Bank data on industrial land access “Accessing Industrial Land” show that Morocco has the longest timeframes (except for Malaysia) for leasing industrial land—private or public. These timeframes are 101 days and 296 days respectively (figure 7.2.8).

ownership of farms. It encourages PPP, the standardization and regulation of rural leases as well as the transformation of collective land into private farms.

7.2.4 Type 4 Test: Camels & Hippos

When industrial land represents a constraint to private investment, firms whose existence depends on the accessibility of industrial land meeting their needs are fewer, which is the case of Morocco. Indeed, comparison of the manufacturing sector’s share in GDP formation in Morocco in relation to the comparator countries (Figure 7.2.9) shows that this contribution is low and can be explained by industrial land access difficulties.

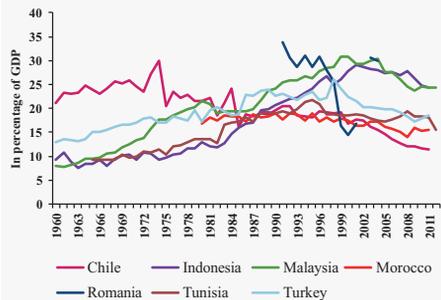
Figure 7.2.8: Time to lease land (private and public) in number of days



Source: *Investing across Borders, Accessing Industrial Land, World Bank*

To address the agricultural land access constraint and allow Moroccan firms to bypass it and invest in the agricultural sector, the Moroccan Government adopted policies aimed at reducing fragmentation and minimizing joint

Figure 7.2.9: Manufacturing sector value added (percentage of GDP)

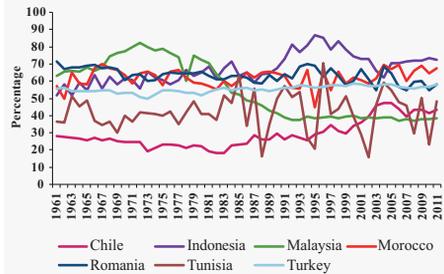


Source: *World Bank, 2014*

In the case of agricultural land, and where there is land scarcity or difficulty in accessing it, much of the agricultural land is used for crops that do not necessarily require an efficient agricultural land system⁷⁴, which is confirmed in the case of Morocco. Indeed, most agricultural land is used for cereal cropping that does not require heavy investments. Morocco invests more in cereal farming, which is more suitable for small-scale farming, despite a comparative advantage in other greater value added crops or in tree crops.

The comparison of the percentage of arable land devoted to cereal crops between Morocco and the reference countries confirms this problem. In 2011, for instance, 67% of arable land was devoted to cereal cropping, compared to 38% for Malaysia and 48% for Tunisia (only Indonesia exceeded Morocco, mainly because of rice growing) (Figure 7.2.10).

Figure 7.2.10: Arable land under cereal cultivation

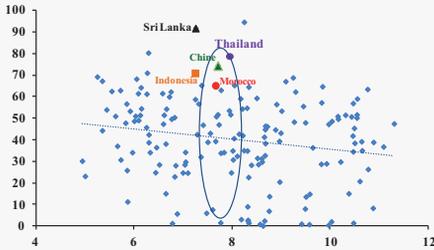


Source: World Bank, 2014

Plantations (with a higher value-added but often based on multi-annual cycles, such as fruit trees) are rare in Morocco, because they usually require greater land security. Figure 7.2.11 confirms these results and shows that the country is well above the average in terms of percentage of arable land used for cereal cropping. Among countries with similar GDP to Morocco only Asian countries such as Indonesia and Thailand have a higher ratio.

⁷⁴ It is generally agreed that cereal cultivation is prone to small-scale farming and does not necessarily require heavy investments and plantation projects.

Figure 7.2.11: Arable land under cereal cultivation and GDP per capita



Source: World Bank, 2014

7.3 The Tax System

7.3.1 Situation and Challenges

The tax system is one of the factors that can result in low returns on private investment. In the case of Morocco, tax rates remain high compared to those of countries with a similar GDP per capita, despite the steady fall in tax rates during the last decade. In addition, the level of social security contributions to the National Social Security Fund (CNSS), remains relatively high

compared to that of similar countries. On the other hand, VAT is a problem for Moroccan firms to the extent that they have difficulties recovering their VAT credits⁷⁵.

The tax system has been used, to a large extent, by Moroccan authorities as a lever of economic incentives. Indeed, tax revenue has always been the main source of overall general budget financing. In 2012, for example, it accounted for 89% of total ordinary revenue (table 7.3.1).

Table 7.3.1: Ordinary revenue trend (in M MAD)

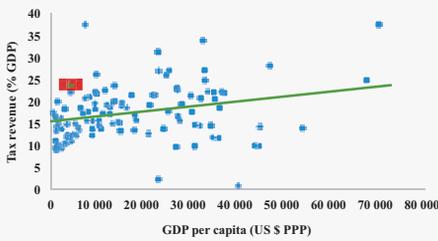
	1980	1990	2000	2010	2012
Tax revenue*	15,109	46,192	80,473	173,562	198,504
Non-tax revenue	1,607	4,514	7,405	16,250	22,266
Total ordinary revenue	16,716	50,706	92,877	193,702	224,064
Share of tax revenue in total revenue (in %)	90.4	91.1	86.6	89.6	88.6

*: including the share of VAT allocated to local authorities
Source: Ministry of the Economy and Finance

⁷⁵ IMF, Consultation report, Article IV, March, 2014.

In this regard, tax revenue as a percentage of GDP increased steadily from 16.4% in 1980 to 23.7% in 2012 (Figure 7.3.1). This revenue was relatively high compared to countries with the same level of GDP per capita.

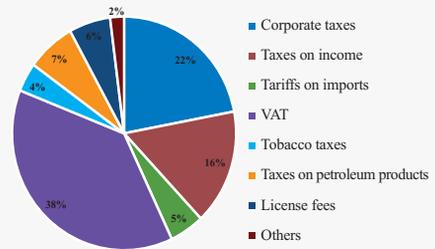
Figure 7.3.1: Tax revenue (in percentage of GDP) relative to GDP per capita (PPA, \$ international)



Source: Development Indicators, World Bank

In 2012, three-quarters of Morocco's tax revenue came from three sources, namely: VAT, income tax (IT), and corporation tax (CT). Other major sources of revenue are domestic consumption taxes and customs duties (Figure 7.3.2).

Figure 7.3.2: Tax revenue by source (2012)



Source: Ministry of the Economy and Finance

The tax burden is not spread evenly among economic agents in Morocco: the weight of CT is borne by a minority of firms and IT is mainly calculated on the basis of formal sector wages. In this regard, according to the report "The Moroccan Taxation System, Economic Development and Social cohesion" by the Economic, Social and Environmental Council, 82% of CT revenue comes from the profits of 2% of companies, and 73% of IT revenue is deducted from public and private sector wage earners. The low

contribution of non-salaried physical persons (traders, entrepreneurs operating privately, liberal professions) should also be noted⁷⁶.

In practice, Moroccan taxation has been undergoing an ongoing reform process since the mid-eighties. These reforms have been undertaken with a view to enhancing efficiency and improving harmonization with international standards. The main objective of these reforms is to develop a modern, coherent, efficient and fair taxation system.

Tax reforms were also carried out to encourage the taxation of the informal economy and ensure the transition of firms into the formal sector. In this regard, the budget bill for the 2011 fiscal year provided for a 15% CT rate for the Very

Small Enterprise (VSE) whose turnover before tax was below MAD 2 M. In 2013, this rate dropped to 10% for firms with taxable income below or equal to MAD 300,000. Reforms were also undertaken to modernize the tax administration and the quality of its services.

Despite this reform process, the objectives have not been achieved and the tax system has lost transparency. The many reforms have resulted in differences in the interpretation of tax revision provisions between the administration and economic operators. These ongoing reforms have made taxation a very complex tool for private investors who have often criticized it and considered it as an obstacle to the expansion of their activities. A general reform is underway, following the National Tax Conference organized in 2013.

⁷⁶ Economic, Social and Environmental Council, 2012.

Box 7.3.1: Main Tax Reforms in Morocco

Many reforms were introduced under successive Budget Laws from 2000 to 2011 resulting in the implementation of a series of measures to simplify, rationalize and harmonize the tax system, with the following results:

- The reform of registration duties in 2004;
- The initiation of the VAT reform in 2005;
- The preparation of the Tax Procedures Handbook in 2005;
- The preparation of the Tax Assessment and Collection Handbook in 2006;
- The compilation of all tax legislation: the General Tax Code published in 2007;
- The notary tax was combined with the registration fees in 2008.

7.3.2 Type 1 Test: High Cost

This test aims to compare the cost (time, rate and administrative complexity) of the Moroccan taxation system compared to the reference countries. If the timeframes are very long and the tax rates high, this could constitute a constraint to private sector development.

The “Doing Business” indicators on the time taken to pay taxes and tax rates were used to conduct this test.

The comparison of these indicators and Morocco’s situation with those of reference countries indicates that taxation is a problem for private sector development in Morocco.

There has been an improvement in the tax administration’s quality and the modernization of its services. Morocco is fairly competitive compared to the reference countries (Table 7.3.2) and falls within the average for countries of the MENA region in terms of time taken and the number of taxes paid per year.

Table 7.3.2: Tax payment: Time (hours per year) and number (per year), Morocco and comparable countries

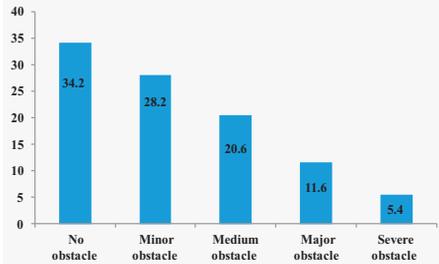
	MENA	Chile	Indonesia	Malaysia	Morocco	Romania	Tunisia	Turkey
Payments (number per year)	19	6	51	13	17	41	8	15
Time-limit (hours per year)	184	291	259	133	238	216	144	223

Source: *Doing Business, 2013*

The reforms carried out have modernized the tax administration and simplified procedures and shortened tax payment time frames. Only 17% of Moroccan firms feel that relations with the tax administration are constraining (major or very severe constraint; Figure 7.3.3). According to Moroccan firms, payment procedures and time frames, and relations with the tax administration do not constitute an obstacle.

Despite the efforts made to reduce tax rates, firms operating in the formal sector still consider these rates as relatively high and constraining on the expansion of their activities. In this regard, and with the objective of reducing the tax burden on the firm, there were several downward revisions of the CT rate. This rate, which was set at 45% in 1987, was cut several times⁷⁷, falling to 30% from 2008. In addition, the CT rate applied to credit establishments and similar organizations was cut from 39.6% to 37% from 2008.

Figure 7.3.3: Level of difficulty represented by relations with the tax administration for business operations

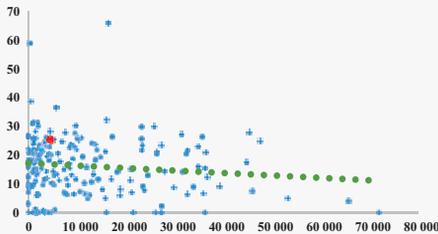


Source: *Enterprise Survey, World Bank*

This observation is confirmed by the recent “Doing Business 2013” report which compares taxes on profits, income taxes and other taxes as a percentage of business profits. Thus, as shown in Figure 7.3.4, despite the reduction in taxes on profits from 35% to 30% in 2008, they remain very high in Morocco in comparison with other countries.

⁷⁷ Decreasing to 44% in 1988, 38% in 1993, 36% in 1994 and 35% in 1996.

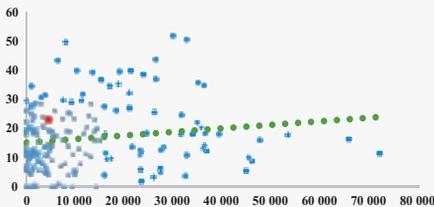
Figure 7.3.4: Taxes on profits relative to GDP per capita (2012)



Source: *Doing Business, 2013*

That also applies to labor taxes and social security contributions (Figure 7.3.5).

Figure 7.3.5: Labour taxation and welfare costs (percentage profit) vs GDP per capita (2012)



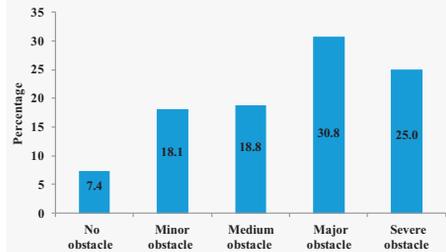
Source: *Doing Business, 2013*

It should be noted that the comparison of tax rates in Morocco with those applied in the other countries of the sample does not take into account the effort made in tax expenditure which, in Morocco, accounted for 4.1% of GDP in 2012,

whereas it only accounts for 1.4% in Turkey (2007) and 3.6% in Chile (2012).

During the World Bank survey on the business climate, 55.8% of Moroccan firms considered that tax rates were high in Morocco and that informal activities were unfair competition against them (figure 7. 3.6).

Figure 7.3.6: Level of difficulty represented by the tax rate for business operations



Source: *Enterprise Survey, World Bank*

This rate is high in relation to the comparator countries: 30% in Tunisia, 19% for Turkey, 25% for Malaysia and 16% for Chile.

Furthermore, 63% of firms operating on the local market and 55% of partially exporting firms consider tax rates as a major or very severe constraint (Table 7.3.3). This problem arises, to a lesser extent, for exporting firms (only 38%), which is explained by the tax incentives that they enjoy.

Table 7.3.3: Perception by Moroccan firms of tax rates and the tax administration

<i>0: No obstacle, 1: Minor obstacle, 2: Average obstacle, 3: Major obstacle, 4: Very severe obstacle, NA: No answer</i>						
Answer	NA	0	1	2	3	4
Tax rates						
Totally exporting firms	0	9.9	35.5	16.5	25.6	12.4
Partially exporting firms	0.8	7.3	17.9	18.7	30.6	24.8
Firms operating on the local market	0	7.0	4.7	25.6	34.9	27.9
Administrative formalities						
Totally exporting firms	0	25.8	45.0	18.3	7.5	3.3
Partially exporting firms	1.1	33.8	27.9	20.4	11.5	5.4
Firms operating on the local market	0	39.5	18.6	27.9	2.3	11.6

Source: Enterprise Survey, World Bank

It is also worth noting that the perception by formal firms of tax administration quality has improved more rapidly than the perception of the level of taxation. This confirms the fact that the level of taxation is a potential constraint to growth and not the tax administration.

7.3.3 Type 2 Test: Relationship between Tax System Indicators and GDP Per capita

This test analyses the relationship between the level of GDP per capita and the tax system. It seeks to ascertain whether income or corporation tax rates correlate with the return on private investment and GDP per capita.

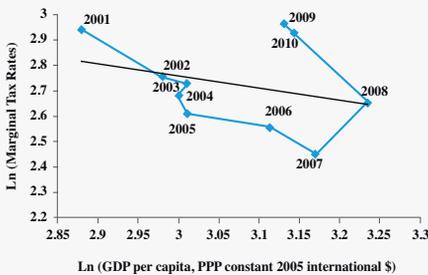
In practice, tax rate reductions or tax exemptions have a positive impact on investment. Low tax rates encourage firms to invest and develop their activities, and reduce informal sector activity.

Conversely, high tax rates can have a negative impact on economic activity, private investment initiative and, consequently, economic growth. Indeed, as shown by Gwartney & Lawson (2006)⁷⁸, very high tax rates can affect economic growth in three ways: (i) they can discourage work effort, (ii) they distort price trends and encourage individuals to substitute less desired but tax deductible goods for more desired and non-tax deductible goods and (iii) they reduce

⁷⁸ Gwartney, J.D & Lawson, R.A, 2006.

private initiatives and the willingness to invest in physical and human capital. In the case of Morocco, there is a negative relationship between tax rates and GDP per capita (Figure 7.3.7).

Figure 7.3.7: Relationship between tax rates and GDP per capita in Morocco



Source: HCP Maroc & Economic freedom of the World

In order to prevent the flight of certain firms (particularly small ones) into informal activities and encourage taxation of the informal economy, Moroccan authorities have, since 2005, embarked on a new wave of tax reforms

for SMEs, aimed at making VAT a central tax of Moroccan taxation and curtailing the informal sector which is developing at the expense of the formal sector.

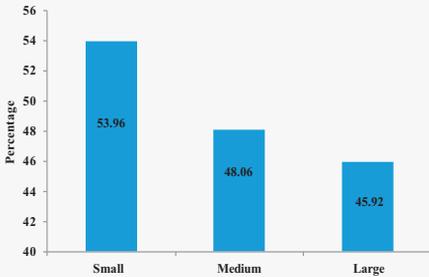
7.3.4 Type 3 Test: By-passing the Constraint

The aim of this test is to determine how firms avoid taxation. In practice, to avoid this problem, firms turn partially or totally towards activities that benefit from exemptions or a special tax regime or even towards the informal sector.

Indeed, in developing countries, this problem of the high cost of the tax system is often accompanied by a highly developed informal sector. Thus, firms prefer to operate informally or carry out certain informal activities in order to avoid paying a tax that they deem too high.

Despite implementation of the different reforms, they have not produced the expected positive impact since the informal sector has continued to penalize formal activities (Figure 7.3.8).

Figure 7.3.8: Percentage of firms suffering from informal sector competition by business size



Source: Enterprise Survey, World Bank

This observation was confirmed during consultations with the private sector as part of this growth diagnostic. Indeed, the tax calculation and payment method is considered very complicated by private investors, whereas in taxation policy, investors expect, above all, a stable, transparent and simple system. Exemptions only have a marginal impact on their decisions. The tax burden is considered unequal and is biased against wage earners and formal sector firms in favor of an informal sector that competes unfairly with them.

In order to bypass this problem and reduce the negative impact of tax rates on private investment and economic growth, measures were taken with a view to (i) stabilizing revenue through more significant mobilization of domestic tax revenue, (ii) reducing tax distortions resulting

from certain weaknesses of the legislative system (excessive exemptions, narrowing of the tax base, etc.) and (iii) promoting greater tax equity.

7.3.5 Type 4 Test: Camels & Hippos

The objective of this test is to determine which firms manage to thrive, despite the high tax rate. In practice, to develop their activities despite the issue of high taxation, firms turn towards activities that benefit from exemptions or a special tax regime.

In Morocco, some firms operating in sectors benefiting from tax incentives or carrying out a highly lucrative activity manage to develop, despite high tax rates. These are firms carrying out construction as their main activity, those operating in the agricultural sector and exporters (of products or services for instance, or mining firms...). This situation often results in a sub-optimal allocation of factors of production by diverting them from more growth and job-creating sectors.

In practice, if high tax rates were to impede private sector development, very few SMEs would transform into big firms. This observation is confirmed in the case of Morocco. Indeed, the size of private firms does not vary very much and small firms tend to remain small while large firms remain large. Thus, the probability that a firm of less than 10 wage earners will

have more than 100 of them after 5 years is 0.4% (Table 7.3.4⁷⁹). Only 24% of firms with fewer than 5 wage earners increased their staffing over a 5-year period.

Table 7.3.4: Transition matrix relative to business size

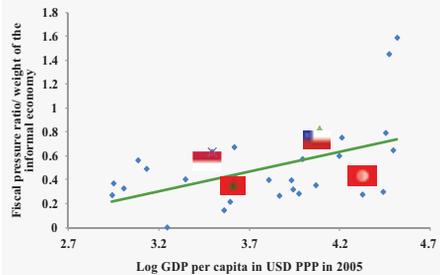
Size	Exit	[0-5]	[6,10]	[11,20]
[0-5]	37.88	38.24	16.56	5.4
[6,10]	30.35	14.61	36.11	13.07
[11,20]	29.83	4.9	15.56	28.67
[21,50]	28.78	1.28	4.37	11.11
[51,100]	29.96	1.21	0	2.43
> 100	26.61	0.81	0.81	0.4

Size	[21.50]	[51.100]	> 100
[0-5]	1.65	0.18	0.09
[6,10]	5.04	0.51	0.31
[11,20]	16.28	3.46	1.3
[21,50]	33.7	14.75	6.01
[51,100]	8.5	33.2	24.7
> 100	4.44	8.87	58.06

Source: World Bank

The analysis of the relationship between the tax ratio in relation to the size of the informal economy and GDP per capita, shows that firms resisting this constraint are generally those engaged in informal activities (partially or totally) (Figure 7.3.9).

Figure 7.3.9: Correlation between tax burden ratio and weight of the informal economy



Source: World Bank

7.3.6 Second-Round Effects

Tax rates are considered high and constraining for private sector development in Morocco and the easing of this constraint could have very significant macroeconomic risks. Indeed, tax revenue constitutes the most important share of Moroccan Government revenue (averaging 90% in recent years). A cut in tax rates could reduce tax revenue and impact on the macroeconomic balances.

⁷⁹ See section 7.4, the labour market, for more details.

7.4 The Labor Market: Financial and Regulatory Cost of Labor

7.4.1 Situation and Challenges

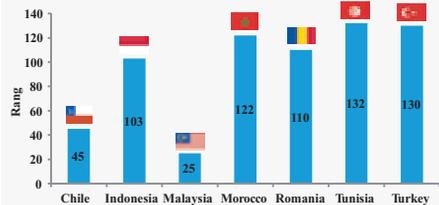
Beyond its social role, labor market regulation is a key factor of economic development and investment promotion, especially in the private sector.

Empirical studies have revealed that excessive labour market regulation tends to reduce productivity, growth and employment⁸⁰ and that the high regulatory cost of labour would i) reduce growth employability ii) push down wages, iii) raise unemployment and iv) impede investment and innovation, which are essential for productivity growth. To strike a convenient balance between the employer's interests and the worker's rights, Morocco regulates its labour market using a Labour Code.

World Economic Forum indicators for measuring labor market efficiency seem to indicate that Morocco has a relatively rigid Labor Code in relation to the comparator countries. While its score has improved in the last ten years, Morocco is still among the less well ranked countries

in terms of labor market efficiency (122nd position out of a total of 151 countries in 2013 (Figure 7.4.1)

Figure 7.4.1: Country ranking in labour market efficiency



Source: World Economic Forum. Report on World Competitiveness, 2013-2014

However, even though wage determination is considered flexible in Morocco (43rd position out of a total of 151 countries), this flexibility is offset by difficulties relating to employee separation costs and procedures, a criterion for which Morocco does not occupy a good position. This observation is also confirmed by the WEF 2013-2014 ranking according to which Morocco has the highest separation costs in relation to the comparator countries (Table 7.4.1).

⁸⁰ Besley and Burgess, 2004, Almeida and Carneiro, 2008, and Poschke, 2006.

Table 7.4.1: Country ranking in labour market efficiency

	Morocco	Turkey	Tunisia	Romania	Malaysia	Indonesia	Chile
Flexibility	76	111	93	92	29	133	65
Cooperation in labour-employer relations	91	82	119	139	19	49	43
Flexibility of wage determination	43	32	129	73	33	106	19
Hiring and firing practices	93	59	105	84	26	39	74
Redundancy costs	97	128	55	8	110	141	120
Effects of taxation on incentives to work	48	108	71	146	10	27	16
Efficiency use of talent	135	133	140	115	32	56	47
Pay and productivity	67	61	108	94	2	29	33
Reliance on professional management	90	66	98	131	21	34	36
Country's capacity to retain talent	54	78	74	138	20	39	12
Country's capacity to attract talent	43	89	103	132	22	28	24
Female participation in labour force, ratio relative to men	141	134	136	77	121	115	106

Source: World Economic Forum. Global Competitiveness Report, 2013-2014

While job protection objectives are important, the Moroccan Labor Code seems to have a negative effect on job creation. It is, therefore, important to measure this effect and its impact on productivity and Moroccan economic growth.

7.4.2 Type 1 Test: High Cost of Labor

The objective of this test is to determine whether regulation and financial cost constitute an obstacle to hiring in Morocco. If regulation is rigid and its

financial costs high, it could prevent firms from scaling up.

This test is carried out on the basis of the results of the Enterprise Survey conducted in 2007. The labor regulation and financial costs are observed from the ranking of constraints to economic activity made by firms.

According to the Enterprise Survey, Moroccan firms do not place labor market regulation at the top of the list of obstacles they encountered. Only 15.8% of Moroccan firms identify labor legislation

as a major constraint to economic activity, compared to a global average of 12.8%⁸¹.

However, a significant proportion of these firms express the desire to grow. More than 29% of large Moroccan firms would want to increase their staffing, if they could do so without restrictions (authorization, cost, timeframes, qualification...) (Table 7.4.2).

Table 7.4.2: Optimum size of firms in number of employees desired, expressed in percentage of current number of employees

	Small	Medium	Big
For a 20% reduction	1.5	2.2	3.9
For a 10% reduction	5.1	7.9	7.8
The current size is the desired size	62.0	57.4	46.3
For a 10% increase	13.9	15.2	20.3
For a 20% increase	4.4	4.3	5.6
For a 50% increase	0.7	2.2	3.0

Source: Enterprise Survey 2007, World Bank

However, the constraint to scaling up firms is due more to the lack of staff qualification upon recruitment than to labor legislation. While 20.6% of Moroccan

firms mention labor legislation as a major or very severe obstacle to their activity, more than 39% perceive lack of training and staff qualification upon recruitment as a major constraint (figure 7.4.2).

Figure 7.4.2: Major obstacles to the conduct of business operations

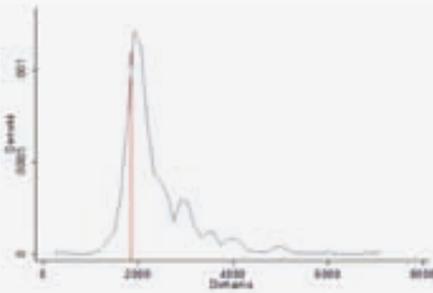


Source: Enterprise Survey 2007, World Bank

The cost of labor in Morocco is considerably higher than in the comparator countries. The minimum wage is close to average productivity per worker. In relation to its income per capita, Morocco promotes unskilled labor. This observation is corroborated by the wage distribution, with very few wage earners receiving less than the minimum wage (Figure 7.4.3).

⁸¹ This average is calculated from the simple average of current estimates at the level of countries. For each economy, only the last available year of survey data is used in this calculation.

Figure 7.4.3: Wage distribution in the industrial sector (2007)



Source: Enterprise Survey 2007, World Bank

In Morocco, wages are subject to centralized negotiation and two official minimum wages are set, one for agricultural workers and the second for the other sectors. The aim of regulation is to ensure a convenient living standard for these workers. However, very high wages in relation to marginal labor productivity can lead to loss of competitiveness.

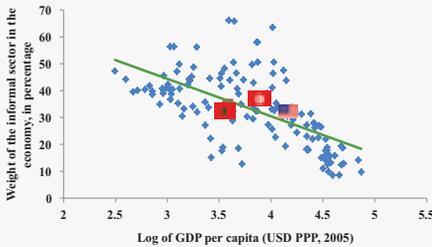
The private sector wage distribution shows that most Moroccan firms pay their employees the minimum wage. It should be noted that the gap between the minimum wage set at MAD 1845 in 2007 and the average wage of MAD 2442⁸², the same year, is relatively high. In this regard, F. Mourji & al (2004) show that the minimum wage contributes significantly in raising the average wage in the Moroccan firm.

7.4.3 Type 3 Test: By-passing the Constraint

If labor regulation and cost were a major obstacle to their economic activity, Moroccan firms would try to bypass them. One way would be to hire workers in the informal sector. The informal sector's importance in the Moroccan economy is fairly low in relation to income per capita, which is the contrary in Tunisia and Malaysia where the informal sectors are more important than might be expected given their level of income per capita (Figure 7.4.4).

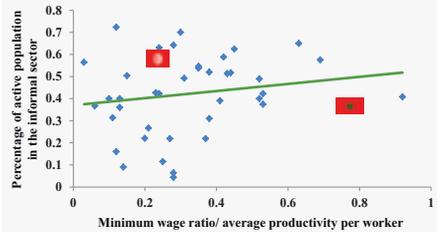
⁸² Estimated from the data of the Enterprise Survey 2007.

Figure 7.4.4: Informality and GDP per capita (2007)



Source: Schneider et al. 2007 & WDI, World Bank

Figure 7.4.5: Relationship between the informal sector labour force and minimum wage/average productivity per worker (2007)



Source: Doing Business, World Bank

The informal sector does not seem to be driven by the desire to bypass the constraint linked to overly-strict labor legislation. Informal sector development can have several causes, especially bypassing the constraint of excessive taxation. Despite the significant minimum wage in relation to average productivity per worker, the estimated percentage of the labor force employed in the informal sector in Morocco is low (Figure 7.4.5). These observations confirm that the cost of labor does not seem to be the main reason driving the informal sector.

Many firms bypass the lack of flexibility in the Labor Code by not maintaining jobs beyond the probationary period (12 months), a period after which all job contracts must be converted into permanent contracts, as required by the Moroccan Labor Code. Thus, the possibility of many employee separations after only one year discourages firms from training them and from adopting or developing more complex technologies which require stable human capital within the firm.

At the same time, while a high proportion of Moroccan firms appear to comply with labor legislation, there are still a high number of strikes in the industrial sector.

In 2012, Morocco recorded 335 strikes in the industrial sector, compared to 418 in 2011⁸³, with a participation rate of more than 45%. These strikes are mainly attributed⁸⁴ to late or non-payment of wages (19.7%), curtailment of social benefits (14.7%) and redundancy (12.5%).

Contrary to the industrial sector, social conflicts in the agricultural sector are due mainly to redundancy practices considered abusive by employees. In the agricultural sector, the main causes of strikes are redundancy (40%), working hours and paid leave (22%), wages (14%) and social security (8%).

However, the economic impact of these strikes is hard to measure. Generally, the absence of data and studies on the direct and indirect impacts of labor conflicts makes it impossible to assess their economic and social cost or the efforts made to contain them. However, this considerable number of strikes implies non-compliance with labor legislation.

7.4.4 Type 4 Test: Camels & Hippos

The objective of this test is to determine which firms will thrive by bypassing labor regulations. Indeed, if labor regulation and cost were really restrictive, very few small and medium firms would grow.

As illustrated above by the transition matrix (Table 7.3.4), the probability that a firm of less than 10 wage earners will have more than 100 wage earners after 5 years is only 0.4%. Similarly, this matrix reveals that only 24% of firms with less than 5 wage earners increased their staffing in 5 years. These 24% can be considered as “camels” in the desert and comprising firms which have bypassed the constraint of labor regulation and cost.

7.5 Governance, Corruption and Transparency

7.5.1 Situation and Challenges

The concept of good governance⁸⁵ is at the core of discussions on the determinants of economic growth, particularly on the conditions of private sector development. It is, therefore,

⁸³ This figure is linked mainly to the contagious effect of the wave of revolts in Arab countries, especially those of the region.

⁸⁴ Figures of the Ministry of Employment and social affairs.

increasingly acknowledged that good governance (which is reflected in quality of institutions) is necessary to accelerate a country's economic development. According to the UNDP⁸⁵, good governance is based on seven core criteria: political legitimacy and accountability, freedom of association and participation, existence of a reliable judicial system, sense of responsibility, freedom of information and expression, effective and efficient public sector management and cooperation with the society's organizations.

During the last decade, Morocco embarked on a reform process aimed at strengthening institutional efficiency. This process culminated in the adoption of a new Constitution in 2011, aimed at consolidating the Rule of Law, enshrining the principles of separation of powers, ensuring accountability and adopting a public service charter that lays down good governance rules on the operation of public administrative services, regions and local authorities and other public organizations. In this regard, Moroccan authorities adopted, in 2012, a Code of Good Governance Corporate Practices of Public Enterprises

and Institutions. In addition, a new Finance Organic Law, being adopted, enshrines the principle of performance in public management. In this regard, Moroccan authorities adopted a Good of Good Governance Corporate Practices (PEI) in 2012. In addition, a new Finance Organic Law, being adopted, enshrines the principle of performance in public management.

However, despite these efforts, governance remains a concern for the Moroccan authorities. The "Heritage Foundation" 2013 economic freedom indicators highlight particular weaknesses, especially in the areas of governance and corruption, property rights and freedom of labor.

This observation is confirmed by the comparison of Morocco's indicators with those of the reference countries. Indeed, Morocco has the lowest score after Indonesia in absence of corruption (34 out of 100) and property rights (40 out of 100), thus indicating issues of good governance in Moroccan institutions. These indicators show that several inadequacies and failures likely to impede investments are governance-related (table 7.5.1).

⁸⁵ According to the Institute on Governance, governance is defined as "the institutions, processes and traditions which determine how power is exercised, how decisions are taken, and how citizens have their say", Canadian International Development Agency, March 1997.

⁸⁶ UNDP: United Nations Development Program.

Table 7.5.1: The “Heritage Foundation” economic freedom indicator, (Morocco and comparable countries, 2013)

	Morocco	Chile	Indonesia	Malaysia	Tunisia	Turkey	Romania
Overall score	60	79	57	66	57	63	65
Property right	40	90	30	55	40	50	40
Absence of corruption	34	72	30	43	38	42	36
Tax freedom	71	78	83	85	75	77	88
Freedom of activity	76	71	50	80	83	68	70
Freedom of labour	30	74	51	72	70	43	64
Freedom of trade	71	82	75	77	58	85	87
Investment freedom	70	85	35	45	35	65	80
Financial freedom	60	70	50	50	30	60	50

Source: “Heritage Foundation, 2013”, Notes on a scale of 0 to 100

In this context, Morocco was ranked 91st in 2013 out of 177 countries in corruption perception, measured by the “Transparency International” index, with a score of 37 out of 100.

According to Worldwide Governance Indicators, Morocco’s indicators on governance and control of corruption⁸⁷ were among the lowest in 2013: -0.04⁸⁸ in government effectiveness and -0.41 for control of corruption, behind Chile, Tunisia and Turkey (Table 7.5.2).

Table 7.5.2: Governance indicators (2013)

	Government effectiveness	Control of corruption
Chile	1.3	1.6
Indonesia	-0.3	-0.7
Malaysia	1.0	0.3
Morocco	0.0	-0.4
Romania	-0.3	-0.3
Tunisia	0.0	-0.2
Turkey	0.4	0.2

Source: World Governance Indicators 2013, World Bank

⁸⁷ Indicators relating to “Government Effectiveness” and “control of corruption”, Worldwide Governance Indicators.

⁸⁸ Score varying from -2.5 (low) to 2.5 (high).

Further efforts are required in order to strengthen the Rule of Law, accelerate justice reform and support business integrity systems and codes of conduct for firms. The efforts of the General Confederation of Morocco Enterprises (CGEM) to sensitize firms in corruption prevention must be encouraged by supporting their generalization and dissemination.

The results of the World Bank's "Enterprise Survey" (2007) confirm this problem linked to governance and in particular corruption. Indeed, 27.3% of Moroccan firms declared that corruption was a major obstacle to their business. This figure is significantly higher than that of Malaysia (16.3%), Chile (17.5%) and Indonesia (14.1%).

However, the issue of corruption was rarely raised by firms during consultations with the private sector. Corruption is mentioned for certain sectors and in relation to judicial procedures.

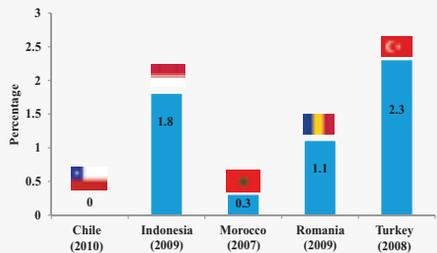
7.5.2 Type 1 Test: High Cost of Corruption

The objective of this test is to analyze the cost borne by the firm as a result of bad governance in public institutions. This test is made by comparing World Bank

"Enterprise Survey" data on the value of the gifts that Moroccan firms pay for the execution of a public contract. Thus, if these rates are high, they indicate a problem of governance and control of corruption within the administration and PEIs.

According to Moroccan firms, corruption does not seem to represent a significant proportion of the value of their contracts (Figure 7.5.1). World Bank Enterprise Survey data show that Moroccan firms pay 0.3% of the value of their contracts in "gifts", which is a very low cost compared to Turkey (2.3%), Romania (1.1%) and Indonesia (1.8%). This low cost can in part explain why about 73% of Moroccan firms do not consider corruption as a major constraint.

Figure 7.5.1: Value of additional amounts necessary for the execution of a public contract (percentage of the contract value)



Source: Enterprise Survey, World Bank

7.6 Trade Barriers

7.6.1 Introduction

Convinced of the importance of openness to international trade in its development process, Morocco has, for many years now, embarked on reforms to streamline trade procedures, and diversify and expand its trade ties, through the establishment of many free trade agreements and the reduction of the ensuing tariff and non-tariff measures.

The openness of an economy can be approached through the trend of exports of goods and services to foreign markets, imports of inputs, the encouragement of foreign investors, the use of external financing or the adoption of common regulations. The analysis is focused mainly on access of foreign goods to the domestic market and of domestic goods to foreign markets. Various positive effects can be expected from the liberalization of trade in goods and services. Increased competition of foreign goods on the domestic market can encourage domestic firms to innovate as well as to use better quality or less costly imported inputs, thus improving their efficiency (Aghion et al., 2009). It is also possible that foreign competition results in a shift of resources from the least productive domestic firms to the

most productive (Melitz, 2003). Finally, better access of domestic firms to foreign markets to meet potential needs, enables them to make economies of scale and acquire know-how.

The efforts made by Morocco in trade openness have been considerable since the mid-90s. To test whether trade barriers are, nonetheless, an impediment to Morocco's economic development, the presence and trend of tariff barriers and non-tariff barriers is analyzed, as well as their role.

7.6.2 Situation and Challenges

- **Trade Agreements**

Preferential trade agreements signed by Morocco are a pillar of its liberalization and openness strategy. Indeed, Morocco embarked relatively early on a process of trade openness with the signing of the GATT (General Agreement on Tariffs and Trade) agreements in 1987, and then acceded to the WTO (World Trade Organization) in 1995. This strong will by Morocco continued with the signing of several preferential free trade agreements with the European Union, the European Free Trade Association (EFTA), the United States, Turkey and the Arab League Countries. The main trade agreements signed by Morocco since the late 1990s are summarized in table 7.6.1 below.

Table 7.6.1: Morocco's trade agreements

	Effective date	Members
<i>Bilateral and regional preferential agreements</i>		
- Morocco-European Union Association Agreement	2000	European Union countries
- Free trade agreement with the European Free Trade Agreement (EFTA)	2000	Switzerland, Iceland, Norway, Liechtenstein
- Trade and investment agreement with the West African Economic and Monetary Union (WAEMU)	Initialed and pending signature	Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal, Togo
- Agreements signed within the framework of inter-Arab and inter-African cooperation:		
• Free trade agreement with Mediterranean Arab countries (Agadir agreements)	2007	Egypt, Jordan, Tunisia
• Free trade agreement with the United Arab Emirates	2003	United Arab Emirates
• Arab Maghreb Union (AMU)	1989	Algeria, Libya, Tunisia, Mauritania
- Morocco-United States free trade agreement	2006	United States
- Morocco-Turkey free trade agreement	2006	Turkey
<i>Multilateral trade agreements</i>		
- WTO agreements	1995	WTO member countries
- Trade facilitation and development agreement between Arab countries (Big Arab Free Trade Area, BAFTA)	1998	Algeria, Saudi Arabia, Bahrain, Egypt, United Arab Emirates, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Palestine, Qatar, Sudan, Syria, Tunisia, Yemen

The European Union is historically Morocco's main trade partner with 47.4% of its imports and 56.8% of its exports in 2012.

The first trade agreement signed between Morocco and the European Union dates back to 1969. As the negotiations progressed in 1976 and 1988, economic, social and

financial components were added to the commercial component. In 1996, following the 1995 Barcelona Declaration establishing the Euro-Mediterranean partnership, an association agreement was signed between Morocco and the European Union and became effective in 2000. In July 2005, the ties between Morocco and the European Union were further consolidated with the European Neighborhood Policy Action Plan. This is a vast Plan made up of many components such as social policy cooperation, migrant flow management, energy sector development, educational system support, etc. During the preparation of this Plan, the negotiation of a free trade agreement in the services sector was initiated. On 13 October 2008, Morocco was the first country to be granted advanced status. Later, Morocco and the EU signed an agricultural agreement in October 2012.

Advanced status implies the establishment of a gradual rapprochement plan with respect to the Community acquis.

Regulatory convergence is an essential element of strong integration between two trade areas. On 1 March 2013, negotiations on a Deep and Comprehensive Free Trade Agreement (DCFTA) were initiated. This

agreement aims to align Moroccan legislation and regulations with EU standards in trade in industrial goods, agricultural products and services, investment protection, public procurement, competitiveness policy and the safeguarding of intellectual property rights.

To develop its trade with high-income countries, Morocco signed a free trade agreement in 1997 with EFTA (Switzerland, Iceland, Norway and Liechtenstein) which entered into force in 2000. This agreement covers several aspects related to industrial, agricultural, agro-industrial and fishery products.

Morocco also turned towards its Arab and African neighbors. It signed many agreements with Arab countries (Agadir Agreement, Greater Arab Free Trade Area (GAFTA), providing for various levels of integration from a simple tariff reduction in import duties to total exemption from these duties.

Other bilateral agreements were signed, especially with Turkey, which provided for a 10-year transitional period as from 1 January 2006.

The free trade agreement with the United States was signed on 15 June 2004 and entered into force on 1 January 2006. This Agreement was based both on trade in goods (industrial, agricultural and fishery products) and services (financial services, telecommunications, tourism, transport, construction, electricity, water, etc.) and on investment. This Agreement also has several components on intellectual property, environmental protection, public procurement, and customs procedures.

These agreements are important since they offer visibility to investors and guarantee them the necessary legal security.

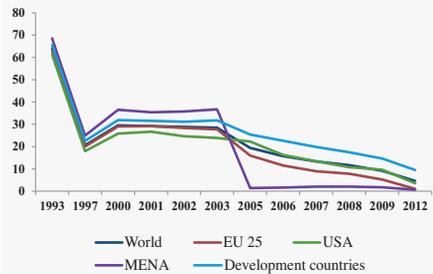
- **Customs Duties**

The many trade agreements signed by Morocco have led to a sharp reduction in customs duties since the mid-1990s (Figure 7.6.1). The reduction in customs duties took place in two waves: i) first, between 1993 and 1997, which corresponds to Morocco's accession to WTO. Following the consolidation of rates, tariffs increased

slightly between 1997 and 2000 and ii) second, after 2000, with the entry into force of trade agreements, in particular with the European Union.

This trend in tariff barriers is important and common to Morocco's various partners. Thus, the average import duty rate dropped from 64% in 1993 to close to 4.6% in 2012. The sharpest decrease concerned trade with MENA countries (whose rate fell from 68.5% to 0.6%). Tariffs applied on products originating from the EU also dropped sharply from 63% to 1.1%.

Figure 7.6.1: Customs duty trend, effectively applied rate (simple average)

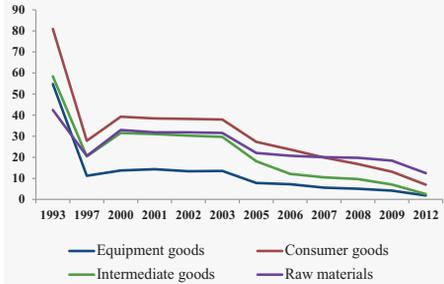


Source: UNCTAD, TRAINS

The customs duty trend by sector of activity shows a general decrease in tariffs but with a stronger trend for industrial products. This gap is explained by the fact that most of the trade agreements are based mainly on industrial products. Indeed, in agriculture, tariffs fell from 66.5% in 1993 to 19.3% in 2012, whereas in industry, over the same period, rates dropped from about 64% to 3.7%.

In addition to the customs duty trend by sector of activity, it is important to take their structure into account to assess the effective protection of an economy. In 2012, the highest tariffs concerned raw materials with 12.5%, followed by consumer goods with 7%, intermediate goods with 2.6%, and then capital goods with 1.9%. A country's effective protection increases if the gap between custom duties applied on inputs and those applied to consumer goods increases. And yet, the decrease in customs duties on consumer goods was identical to the rate of decrease in tariffs on inputs for the period from 1993 to 2007 and higher after 2007. Protection, therefore, decreased and a downward shift towards convergence of customs duties was observed (figure 7.6.2).

Figure 7.6.2: Customs duty trend by category of goods, effectively applied rate (simple average)



Source: UNCTAD, TRAINS

The maximum rate that Morocco applies on imports is 304% (Table 7.6.2). It concerns only agricultural products. In industry, the maximum rate is 50%. As might be expected, the number of tariff headings exceeding 3 times the overall simple applied rate is high in agriculture. On the other hand, it is relatively low in industry. This observation is very different regarding the number of international peaks (number of tariff headings exceeding 15%), which is higher in industry.

Overall, it appears that tariff dismantling in Morocco has been significant in the last 15 years. It is obvious that, in the

coming years, tariff decreases will be smaller. The rare tariff reductions which could still be envisaged concern imports from developing countries, excluding MENA countries.

Table 7.6.2: Morocco's tariff profile

	Total	Agriculture	Industry
Simple average	4.58	19.32	3.65
Weighted average	3.4	14.44	1.93
Standard deviation	12.11	29.09	8.04
Minimum rate	0	0	0
Maximum rate	304	304	50
N°. of domestic peaks	45 69	4 358	211
N°. of international peaks	36 272	8376	27 826

Source: World Bank/UNCTAD NTM data

- **Non-Tariff Measures (NTM)**

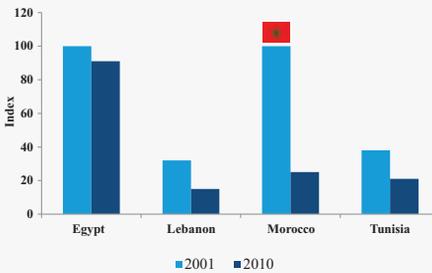
NTMs can impact trade in many ways without the objective of protecting the national economy. They are not only implemented for the purpose of protectionism, but also in response to increased demand for traceability, quality and consumer protection. NTMs can help to reduce health risks, a product's lack of safety or environmental degradation. They may, therefore, concern the production process of a good, its content, its technical characteristics, labelling, product or

quantity control as well as procedures applied to verify these requirements (Baldwin 2000).

In response to increasing requests from some trade partners to adapt Moroccan products to international standards (particularly European) and facilitate trade, Morocco adopted a number of measures. In addition to the reduction in tariffs, Morocco's trade policy also concerned non-tariff measures, by reducing the number of these measures and harmonizing some of them to international standards. With the Community acquis, NTMs aim to ensure the country's convergence towards the common body of rights and obligations of European Union Member States.

Unlike other comparator countries like Chile and Indonesia as well as other MENA countries like Tunisia, Egypt or Lebanon, Morocco tends to impose non-tariff measures on low-value items. Thus, Morocco is among the top third of countries with the least NTMs. The efforts deployed by Morocco to reduce the impact of NTMs or the percentage of products on which one (or several) non-tariff measure(s) is/are applied, since the last wave of collection in 2001, are outstanding (Figure 7.6.3). The frequency index has decreased by 75%.

Figure 7.6.3: Frequency index trend between 2001 and 2010



Source: World Bank/UNCTAD NTM data

- **Challenges**

The efforts made by Morocco in international goods and services trade openness have been considerable both in terms of customs duties and non-tariff measures. Indeed, tariff dismantling has been so significant that the rare possible opportunities to reduce customs duties are to be found only in the agricultural sector or from developing countries, excluding MENA countries. The efforts in terms of harmonization and regulation, and reduction of non-tariff measures are outstanding.

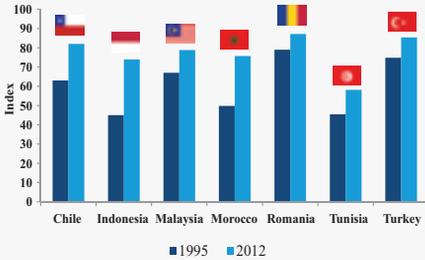
However, an important point to be emphasized is the liberalization of services. Services must be treated in a distinct manner. Certain categories of services may be more sensitive than others and require greater caution. It is, therefore, important for the Government to be vigilant and correctly identify the sectors for which alignment of regulations with those of partner countries or with international regulations can be beneficial.

7.6.3 Trade Freedom Comparison

It is relatively easy to trade in Morocco.

Figure 7.6.4 presents a Heritage Foundation indicator on trade freedom in 2010. This indicator assesses trade freedom on a scale of 0 to 100. With an index above 75, Morocco is well-positioned, even if certain reference countries, like Romania or Turkey, have higher scores. Trade reforms undertaken by Morocco increased the economy's degree of openness which resulted in a significant improvement in external assessments on this issue between 1995 and 2012.

Figure 7.6.4: Trade freedom index in 2012



Source: Heritage Foundation

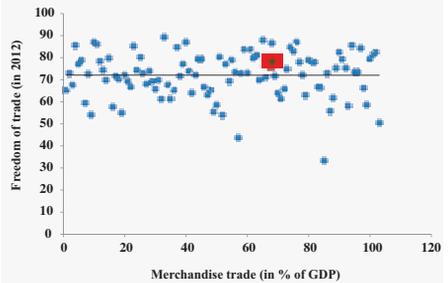
7.6.4 Type 2 Test: Estimate of the Correlation between Trade Openness and the Level of Economic Development

The objective of the test is to determine the link between trade freedom and the level of trade in relation to income. Therefore, this test measures the constraint level by situating Morocco in relation to its comparable countries to answer the following question: Is trade freedom enough to develop trade in goods in Morocco?

Morocco seems to have a slightly higher degree of trade freedom considering its

income level. Even though there do not appear to be any major impediments to international trade, it is important to link the country's openness to its level of wealth. Indeed, trade openness is often a means for countries to improve the level of productivity of domestic firms through keener competition and exploration of new foreign markets. Figure 7.6.5 illustrates the correlation between real income per capita in 2012 and the trade freedom index. Morocco is well-positioned, since it lies on the trend line. Thus, the level of trade is as expected given the country's degree of openness.

Figure 7.6.5: Correlation between real income per capita in 2012 and trade freedom index



Source: World Bank, WDI and Heritage Foundation

7.6.5 Type 3 Test: Are Firms Able to Trade?

The objective is to determine the ability of firms to trade. It will, therefore, be necessary to consider the proportion of firms that export and those that import in order to determine to what extent Moroccan firms are capable of integrating into global trade.

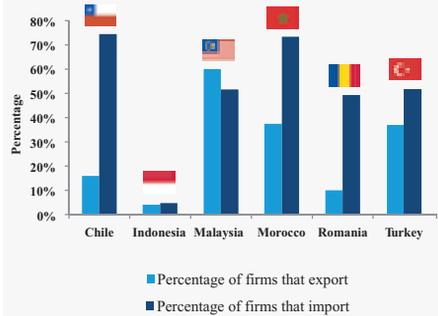
Openness to international markets is not a constraint for domestic firms (Figure 7.6.6). Indeed, among the comparator countries, Morocco has the second highest number of exporting firms after Malaysia (37.5%). Morocco also has the second highest number of importing firms (73.4%). This result indicates that trade barriers are not a constraint to Morocco's growth, which is consistent with the results of the preceding tests.

7.6.6 Type 4 Test: Import Trend by Major Sectors

The objective of this test is to compare the import trend of major sectors. Since customs duties fell more rapidly in industry than in agriculture, a drop in agricultural imports and an increase in industrial imports might be expected. Therefore, this test will make it possible to determine

whether the sectors with more gradual trade openness were constrained in their trade development.

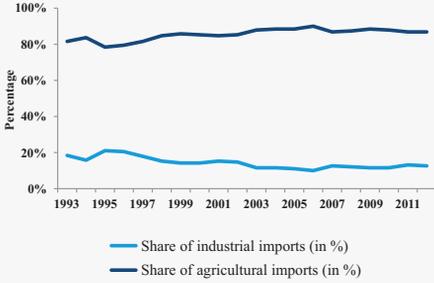
Figure 7.6.6: Proportion of exporting and importing firms



Source: World Bank, WDI and Exchange Office

Imports of agricultural and industrial products rose. In the import breakdown, the share of agricultural products trended downwards slightly (this share fell from 18% in 1993 to 13% in 2012), whereas the share of industrial imports rose (from 82% in 1993 to 87% in 2012) (Figure 7.6.7). Since the agricultural sector is protected more than the rest of the economy and since, in industry, the domestic market's competitive structure had changed, industrial imports increased faster than agricultural imports.

Figure 7.6.7: Import breakdown trend



Source: World Bank, WDI

However, despite a slower decrease in customs duties in agriculture, imports did not decrease. In fact, the reverse was the case.



Chapter 8

Innovation



Chapter 8: Innovation

Key Messages

- Innovation, defined as the development or adoption of new technologies, techniques, products and services, is a key driver of economic growth.
- Without effective central government intervention to correct market shortcomings regarding innovation and closer coordination with the private sector and among public innovation promotion agencies, investments incorporating innovation with a high efficiency level, capable of stimulating growth, might not be made.
- Analysis of Morocco's export basket trend over the last 30 years reveals a low level of sophistication relative to the level of income per capita and fairly modest results in terms of structural transformation compared to the comparator countries.
- Morocco's inability to make technological progress appears to be mainly due to microeconomic risks and a shortage of human capital, and to a lesser extent, weaknesses due to learning and coordination externalities.
- Lack of coordination between the government and the private sector and among the different public innovation promotion agencies is a constraint to a strong and sustainable growth.
- The available indicators do not make it possible to qualify market innovation weaknesses as a major constraint to growth in Morocco.

Introduction

Innovation, defined as the development or adoption of new technologies, techniques, products and services, is a key driver of economic growth alongside capital and labor. In addition to the public policy weaknesses identified throughout the diagnostic, market shortcomings in terms of innovation⁸⁹ (Annex 8.1) may affect returns on investments⁹⁰.

Without effective government intervention to correct it and real public-public, public-private and private-private coordination, innovative investments likely to boost growth might not be made. Grossman and Helpman (1991) show that growth depends, in part, upon the ability of producers to climb quality ladders. Similarly, Hausmann, Hwang and Rodrik (2007) formulate a theory of “self-discovery” whereby firms must discover their own productivity. Either of these two theories may explain the correlation documented by Hausmann, Hwang and Rodrik (2007) between what countries produce initially

and their subsequent per capita growth rates.

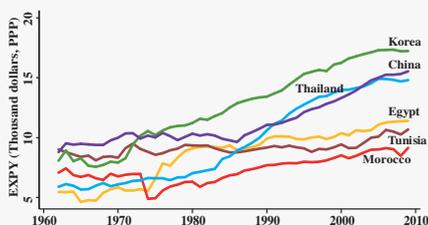
Although market failures in innovation are a reality, determining whether they constitute a major constraint to growth in a given country is difficult. One way to approach this question is to assess the strength of government efforts to address such market failures. Determining whether a country’s innovation performance is slow in relation to its overall investment and growth performance could also provide an answer to the question considered throughout this chapter. A high cost of financing, low skill levels and lack of key infrastructure, for instance, may impede innovation and sophistication in a given country.

The Moroccan economy has become fairly diversified and sophisticated over the last two decades. However, its results remain modest as compared to those achieved by other countries in the region. Morocco’s export basket remains the least diversified and least sophisticated among the comparator countries, despite relatively comparable levels in 1970 (Figure 8.1).

⁸⁹ Market weakness is a case where the market fails in the optimum allocation of economic resources and goods and services. This is an eminently political concept as it serves to justify policy interventions aimed at correcting markets, i.e. the peaceful and voluntary coordination of operators.

⁹⁰ Innovation externalities drop considerably if innovating investors share an innovation’s productivity with other actors, who, through imitation, take advantage of it.

Figure 8.1: Sophistication index trend (1960-2012)



Source: Authors' calculations according to Hausmann, Hwang and Rodrik, 2007, from the PRODY of the year 2000 for calculation of each year's EXPY

Major constraints to innovation result mainly from microeconomic and human capital risks. If the share of skilled labor is low and if the success of firms as a result of innovation-related risk-taking is offset by a tax increase, it is impossible for firms to develop innovative practices or invest in innovative processes. Moroccan firms have not diversified enough and rarely innovate despite the Government's active support to innovation through the establishment of various subsidy and financial support programs.

The lack of available indicators makes it impossible to qualify market failures in innovation as a major constraint to growth in Morocco. On the other hand, lack of public-public, public-private and private-private coordination that can support innovation could be a major constraint to a strong and sustainable growth.

8.1 Transformation and Diversification Performance

The structural transformation of the Moroccan economy is relatively slow.

The size of the agricultural sector in relation to GDP has changed little. Over the 1980-2012 period, the contribution of agriculture to GDP averaged 16.7%. The shares of industry and services in production also remained virtually unchanged from 1980 to 2012 at around 31% and 53% respectively.

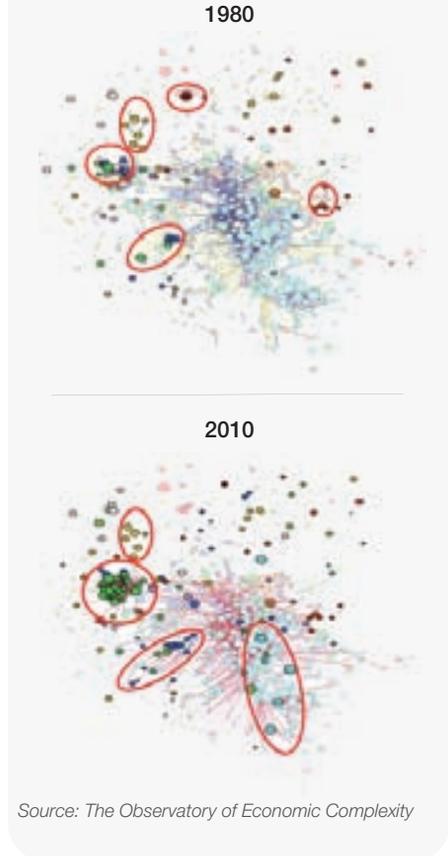
However, Morocco seems to have succeeded in diversifying its export basket. While it was mainly an exporter of phosphates and agricultural products in the 1970s, Morocco, especially from the 90s, has exported clothing and textile products, electronics and chemicals

(see export basket composition, Annex 8.1-Figure 1).

Morocco's product space⁹¹ in 1980 was consistent with the results of the economic complexity index. Indeed, the product space shows that Morocco produces goods in a handful of peripheral export sectors such as natural resources, clothing and textiles. This situation limits coordination opportunities and shows that firms must make more significant technological progress to shift to other productive sectors generating higher value added.

On the basis of the 2010 product space, it is clear that, in thirty years, Moroccan firms have made little progress up the value-added ladder. In 2010, Morocco developed clusters in the electronics and machinery sector (blue) and strengthened its presence in the textiles and clothing sector (green). However, these developments remain relatively low in relation to those achieved in the comparator countries, (see Figure 8.2).

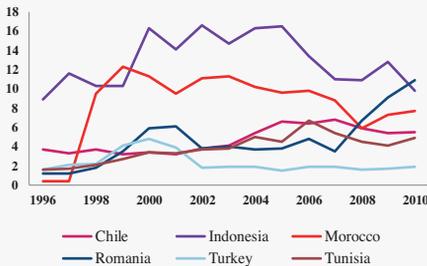
Figure 8.2: Morocco in the product space (1980 and 2010)



⁹¹ Product space is illustrated using a space card which measures the "distance" between products, that is to say the ease of passing from specific products to other products given the observed frequency of such passage in the world.

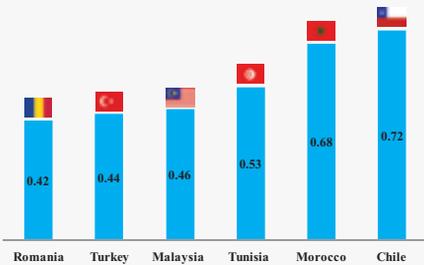
While Morocco has recorded an average annual export growth rate of 6.4% over the last twenty years, the absence of technological progress in the manufacturing sector remains worrisome. Despite the increase recorded in the share of high-tech exports since 1997 (from 2.5% in 1993 to 7.7% in 2010), Morocco's technological progress and export sophistication remain modest in relation to the comparator countries (Figures 8.3 and 8.4).

Figure 8.3: Exports with high technology content (percentage of manufactured exports)



Source: World Bank, 2013

Figure 8.4: Export diversification index (2012)



Source: UNCTAD, 2012

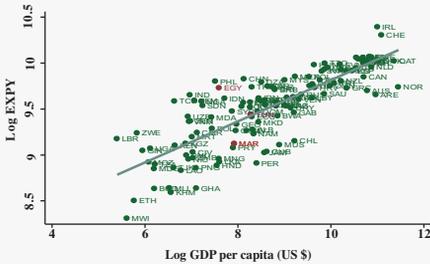
The Herfindahl-Hirschman index⁹² and the Hausman, Hwang and Rodrik index (2007)⁹³ confirm these results. Morocco's export diversification is the lowest among the comparator countries. It is lower than in Romania, Turkey and Malaysia (Figure 8.5). With regard to the Hausman, Hwang and Rodrik EXPY index (which serves as an indicator of a country's ability to catch up with the value chains of developed countries, particularly in the final production phases)⁹⁴, Morocco displays an abnormally low level of export sophistication for its level of development.

⁹² We frequently use the Herfindahl-Hirschman diversification index to measure a country's exports. It measures the level of concentration of export markets by product category (using 3-figure typical classification codes of industries). The level of concentration varies from 0 to 1 (1 = undiversified economy; 0 = extremely diversified economy).

⁹³ Each product is assigned a product complexity score (PRODY) equal to the weighted average of the income levels of the countries that export that product. Then, a country's overall EXPY value is computed as a weighted average of the PRODY values of its exports, with the weights depending on the value share of each product in the export mix.

⁹⁴ Baldwin (2011) has criticized the empirical work underlying the Hausman-Huang-Rodrik model, noting that trade statistics attribute the full value of exported products to the country that ships them, whereas in reality many such countries are simply carrying a limited set of tasks as part of an international supply chain that together produces the final product. Baldwin argues that "product characteristics may tell us something about the embodied factors and technology, but very little about the nationality of those factors and technologies. To take a well-known example, China's iPod exports tell us more about the US industry than it does about Chinese industry".

Figure 8.5: Export sophistication and income per capita (2008)



Source: Authors' calculations from data COMTRADE

*The level of complexity of Morocco's exports remains low in relation to its income per capita*⁹⁵. In addition to export basket diversification, we can also try to assess the level of frequency or “ubiquity” of export products, which reflects the extent to which goods produced are relatively common goods on the global market. Lower ubiquity is a sign that a country has capabilities that are relatively rare in the world. Similarly, greater diversity is a sign of varied capabilities. Thus, low ubiquity and high diversification confer competitive advantages and a high level of complexity⁹⁶.

8.1.1 Type 1 Test: Level of Complexity in Relation to GDP per capita

The objective of this test is to determine whether the level of complexity of Moroccan exports matches its level of income per capita. The test is conducted using GDP per capita data in constant 2005 USD and from export complexity levels available from the Harvard University Observatory of Economic Complexity.

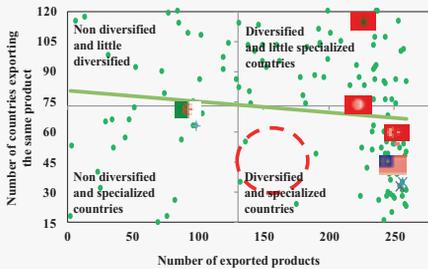
Morocco's export basket was relatively undiversified during 1995-2011 but there was some transformation. Data indicate that Morocco has made progress in transforming its export basket by exporting more in the non-traditional sectors of the automobile and aeronautic industry. Morocco's export basket trend during the period 1995-2011 shows that the share of mechanical product exports rose from 6% of total exports in 1995 to 17% in 2011.

⁹⁵ The complexity index is computed from the export basket's diversity (number of products) and ubiquity (shortage of products). Contrary to the EXPY sophistication index, the export complexity index does not use any information on prices or product-related revenue levels.

⁹⁶ Ricardo Hausmann (2009).

Morocco is among those countries that are diversified, but unspecialized. The Moroccan economy is a diversified economy which exports standard products. Malaysia and Turkey show almost the same diversification level as Morocco and Tunisia, but export far fewer standard or ubiquitous products, suggesting greater complexity (Figure 8.6).

Figure 8.6: Diversification and ubiquity (2012)



Source: Authors' calculations (Comtrade and BM 2013)

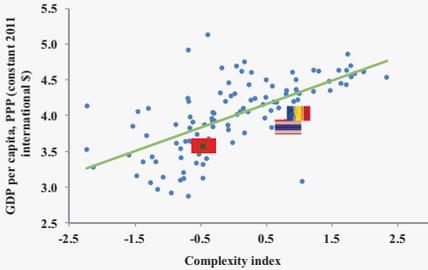
Morocco does not then have the strong competitive edge associated with specialization that would enable it to achieve future strong growth. Hidalgo and Hausman (2009) show that the distance separating the country from the regression line is a future growth indicator, which leads us to the conclusion that Morocco's growth rate is relatively slow.

8.1.2 Type 2 Test: Relationship between Private Investment as percentage of GDP and Export Sophistication

This test analyses the relationship between private investment in percentage of GDP and export sophistication.

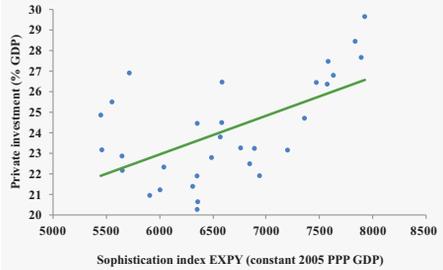
There is a positive relationship between sophistication performance and private investment (Figure 8.7).

Figure 8.7: Complexity index and income per capita (2011)



Source: *The Observatory of Economic Complexity and World Bank, 2013*

Figure 8.8: Private investment rate (percentage of GDP) - Sophistication Index (1980-2010)



Source: *The Observatory of Economic Complexity and World Bank, 2013*

Granger causality tests were carried out to determine whether sophistication leads to private investment improvement and vice versa. The results showed that the causal relationship between the export sophistication index and private investment operates one-way, with a one-year time lag. Thus, an increase in the export sophistication level in Morocco leads to an increase in investment (Figure 8.8).

8.2 Government Policies to Address Market Failures in Innovation

Morocco's low export complexity and sophistication performances can be explained by the theory of market failure, advanced by Hausmann, Hwang and Rodrik (2007). Morocco's first sophistication phase was above that of Egypt and Thailand. According to the theory of market failures,

the Moroccan economy's growth per capita should have been higher than that of these two countries. However, Thailand and other middle-income countries have succeeded in innovating and achieving much more rapid growth. Market failures, which aggravate the initial export sophistication shortcomings, could explain the relatively low level of sophistication.

8.2.1 Industrial Policies and Strategies

In order to emerge from the agricultural economy stage, Morocco initiated many industrial policies following independence ranging from import substitution policies in the 1960s, to government investment in the industrial sector during the 70s⁹⁷, support to exporting industries during the 1980s or the sector policies of the 2000s. The country has always deployed substantial resources to support the structural transformation of its economy.

Central government has always played a determining role in the Moroccan economy's industrialization effort. To

help new investors to overcome the possible failures of information and innovation markets, the Moroccan government has established several support agencies and structures: the Morocco Export Centre (Centre Maroc Export) for export promotion established in 1976, the Moroccan Export Insurance Company (SMAEX) established in 1989, the National SME Promotion Agency (ANPME) established in 2002, the Moroccan Agency for Investment Development (AMD) established in 2009 and the Moroccan Innovation Centre (CMI) established in 2011.

Donors have also supported Morocco in its program to upgrade the industrial sector (Programme de mise à niveau, PMN). Established in 1998, the PMN was the main instrument for upgrading firms in the early years of its operation⁹⁸. The program receives support from the European Union under the 1995 Euro-Mediterranean Free Trade Agreement. It was designed as a transitional agreement to help local firms which are increasingly affected by international competition.

⁹⁷ During the 1973-1977 plan, and beyond its incentive role, the State intervened more decisively in the industrial sector as a promoter and an entrepreneur.

⁹⁸ Euro Maroc Entreprise (EME) is a European Commission-financed program, with an operational budget of EUR 13.3 million. It was established to help upgrade Moroccan SMEs through actions aimed at improving the competitiveness of Moroccan firms (strategic diagnosis and specific upgrade actions such as the improvement of production management, support to certification, commercial development, etc.) and actions aimed at improving the entrepreneurial environment, in partnership with professional associations (sectoral studies, information/sensitization seminars for firms, export promotion activities, search for partnerships, etc.). The EME program ended on 30 June 2004. The "PME - MEDA II modernization" program, which lasted until 2008, took over from the latter. www.eme.ma

However, the results of industrial policies launched since the 60s remain modest in relation to the initially set objectives.

Industrial policies have not completely succeeded in transforming supply structures and setting the Moroccan economy on a new growth path, in which the agricultural sector and technology-intensive exports play an important role.

Consequently, in order to revitalize the industrial sector and respond to the changing international situation, Morocco has embarked on a new more modern and innovative industrial strategy.

The National Industrial Acceleration Plan for 2014-2020 succeeds the National Industrial Emergence Plan (PNEI) launched in 2009 and which enabled the country to develop new industries such as aeronautics or automobile manufacturing by attracting large groups like Renault or Bombardier. In this regard, this new strategy aims to build on, consolidate and develop the successes already achieved in the Moroccan industrial sector. This plan will be based on key measures with the following objectives i) creating a new momentum and a new relationship between large firms and SMEs, ii) strengthening industry's position as the major source of jobs, especially for youths iii) optimizing the social and economic benefits of public procurement through industrial compensation. The new plan will also help to support the transition from the informal to the formal sector with the establishment of a full-fledged mechanism for integrating the

Very Small Enterprise (VSE), to meet the key challenge of matching skills with the needs of firms and the establishment of a public industrial investment fund (*Fonds de Développement Industriel*, FDI), which will be provided with a package of MAD 20 billion by the year 2020.

In order to respond more effectively to growing competition on world markets, Moroccan authorities have endeavored to ensure that national producers increase their exports and improve product quality.

In 2009, the Department of Industry launched a participatory reflection process called "Maroc Innovation," including several key sector actors, especially the Ministries concerned, firms, academia and financial operators. In addition to strengthening the Moroccan innovation ecosystem, this initiative sought to establish by 2014 (i) 1000 Moroccan patents and (ii) more than 200 innovative start-ups.

The "Maroc Innovation" initiative consisted of analyzing the Moroccan innovation value chain and defining the actions to be taken to enable this value chain to operate as effectively as possible.

Thirteen action measures were defined under this initiative, classified into four areas : (i) governance and the legislative framework, (ii) infrastructure, (iii) financing and support to firms, and (iv) mobilization of talents. The main measures are (a) modernization and adaptation of the legislative framework; (b) establishment of

the Moroccan Centre for Innovation: first one-stop shop with three different financing instruments; (c) stimulation of the venture capital sector; (d) establishment of new clusters: innovation centers in collaboration with four universities to run the R&D projects and encourage start-up incubation; and (e) the establishment of the first Moroccan innovation club (social exchange network).

To this end, venture capital is a means of financing innovation and start-ups in Morocco. Investment capital emerged in the early 90s with the establishment of the Moussahama management company, which, for a long time, was the sole operator on the market. Starting from the year 2000, other funds emerged, including the Moroccan Association of Capital Investors (AMIC) created the same year. Founded at the initiative of four operators, AMIC today brings together most of Morocco's capital investment actors.

The Moroccan venture capital industry is rapidly expanding. Cumulative investments in 2012 stood at 3.6 billion dirhams for 140 firms and a 16% internal rate of return. The sector's dynamism encouraged the government to actively engage in the development of capital investment, especially through the Savings and Investment Fund (CDG). The activity's development potential also attracted banking establishments, which established their own investment capital funds. In less than 15 years, the cumulative capital investment amounts raised by

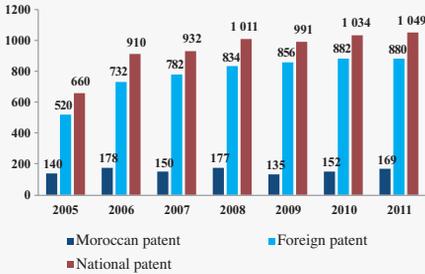
Moroccan industry rose from MAD 400 million to 8 billion dirhams.

However, to-date, the contribution of venture capital to innovation financing remains low. Only 2% of amounts raised are allocated to seed capital funding. Morocco's four seed capital funds account for MAD 300 M of the capital raised. Investments remain highly concentrated in a few sectors of activity, mainly the services and construction sectors, and the chemical and agri-food industries. In terms of geographical concentration, Greater Casablanca's share is gradually declining in favor of other regions, especially the Tangier-Tetouan region.

Morocco has a system to safeguard intellectual property that guarantees the protection of local innovations and does not constitute an obstacle to the legal importation or entry of foreign technologies. It applies the rule of international exhaustion for foreign patents.

Morocco has also signed several treaties on the protection of trademarks, licenses and patents (Figure 8.9). However, further efforts are required in this area. Indeed, Morocco's position in the Global Competitiveness Report in 2013 shows that the country needs to implement urgent reforms in the area of intellectual property safeguards. Morocco is ranked 90th out of 148 countries, with a score lower than the average (3.3 over 7).

Figure 8.9: Trend of patent registration applications since 2005



Source: Ministry of Industry, Trade, investment and the Digital Economy

8.2.2 Industrial Parks – A Key Factor in Sector Policy

In the late 1970s, Morocco launched a program to establish industrial zones.

However, because of the structural changes of the early 1980s, this program was unsuccessful. In the Emergence Plan, the Government made provision for industrial parks, technology parks and free trade zones to serve both national and foreign investors.

Morocco has almost 70 industrial zones (less than half of which are operational), two operational offshore zones, and seven technology parks. These parks are situated in densely populated towns (of more than one million inhabitants), with universities

and faculties that can meet the human resource requirements of firms.

Currently, three of the 7 technology parks are operational, others are under construction and some are not fully operational. Opened in 2007, the Casablanca Technology Park is the first Moroccan industrial park specialized in ICTs. The Rabat and Oujda Technology Parks have also been operational since 2008 and 2011.

Box 8.1: Tangier Free Trade Zone: A Zone of the Future

The Tangier Free Trade Zone (FTZ) was established in 2001 and developed mainly from foreign capital attracted by tax incentives, infrastructure and geographical situation.

The ZFT hosts many firms, which are developing many new products and activities. According to a global ranking on "Global Free Zones of the Future, 2012-2013", the zone tops the "best port free zone" category and is ranked sixth in "zones of the future".

In addition to manufacturing activities, this zone hosts service activities, which are developing rapidly.

Technology parks offer investors substantial tax incentives as well as outstanding infrastructure. These parks have geostrategic sites, with high national and international connectivity, close to airports, high-speed train and railway lines, and highways. Investors setting up shop in the Rabat Technology City (Technopolis) are granted a 20% effective IT rate, a 0% CT rate for the first 5 years and a 50% discount thereafter, and highly competitive monthly rents. Morocco's four offshore parks are managed and run by MedZ Sourcing, a subsidiary of the Savings and Management Fund (CDG), by authorization of the Ministry responsible for Industry.

It is still too early to assess the impact of the establishment and operationalization of the Moroccan technology parks.

8.3 Other Explanatory Factors of Morocco's Mixed Performance in Innovation and Sophistication

Even though the Moroccan Government has identified and supported sectors quite similar to those described by Rodrik & Hausmann as being sophisticated and likely to rapidly generate productivity gains, these gains have not been observed over the last few decades⁹⁹. Rodrik states that developing countries can obtain

productivity gains by supporting industries which benefit from unconditional convergence. The important question is to determine why the growth of sectors which experienced rapid productivity gains in other countries was inadequate in Morocco. What should the country do to further sophisticate its economy?

Morocco's limited structural transformation and its position in the product space (which shows an absence of connection between sectors) emphasizes the lack of coordination in the shift to new, innovative and more sophisticated activities. The product space shows that Morocco produces goods competitively in a handful of peripheral sectors¹⁰⁰ in the product space: natural resources, the clothing and textile sector, as well as the electronics and machinery sector.

There are many government export promotion and innovation support entities and agencies. However, coordination between the latter and the public and private sectors seems inadequate. It is essential to build the monitoring capacity of national export activity, identify the constraints and address them efficiently. In addition, it is strongly advisable to involve the private sector more closely in order to better guide Government efforts in industrial policy implementation.

⁹⁹ See the preceding section: innovation and structural transformation results.

¹⁰⁰ Situated at the edges of product space.

The Government should play a catalytic role in encouraging firms to innovate or engage in sophisticated and higher value-added activities. However, Government support to innovation must be done in a comprehensive manner by limiting coordination-related problems among the various public entities altogether as well as with the private sector. An export and innovation-driven growth model must be established as a national priority and supported by additional actions. Thus, macroeconomic stability, trade financing, investments in R&D and trade logistics are only examples.

In addition to providing essential public goods (a competent and transparent administration, an independent judicial system, education, health and infrastructure), the Government should contribute to addressing the coordination issues that constitute a constraint to the production of new goods and the structural transformation of the country's economy¹⁰¹. Hausmann (2005) shows that technological progress

requires policies which go beyond the fundamentals for two reasons. First, the initial production structure impacts on future productivity growth. More specifically, countries, whose export basket is more sophisticated, experience more rapid growth and even succeed in exceeding their initial income level (Hausmann, 2009). Secondly, market failures, especially “learning-by-doing” in certain sectors, knowledge dissemination and coordination failure risks indicate that the government has a key role to play in order for firms to produce more sophisticated goods and thus boost growth.

In conclusion, it is essential to rethink the issues of consistency of public strategies and policies and coordination in the economic sphere. To achieve this, Morocco could capitalize on the experiences of other countries, especially emerging Asian countries which, with sophistication levels similar to those of Morocco in the 1960s and 1980s, now appear among the most sophisticated countries globally (South Korea, China, and Malaysia)¹⁰².

¹⁰¹ AfDB, 2012.

¹⁰² Ibid.



Appendices



ANNEX 1.1: List of Participants in the Consultations on Constraints to Economic Growth in Morocco

Moroccan Public Administration and Institutions

Ministry of Interior
Ministry of Justice and Freedoms
Ministry of Economy and Finance (Directorate of Treasury and External Finance, Directorate of Studies and Financial Forecasts, Budget Directorate and Directorate-General of Taxation)
Ministry of Urban Planning and Regional Development
Ministry of Agriculture and Fisheries
Ministry of Education and Vocational Training
Ministry of Higher Education, Scientific Research and Professional Training
Ministry of Equipment, Transport and Logistics
Ministry of Industry, Trade, Investment and the Digital Economy
Ministry of Health
Ministry of Communication
Ministry of Tourism
Ministry of Solidarity, Women, Family and Social Development
Ministry of Crafts and Social Economy
Ministry of Employment and Social Affairs
Ministry Delegate to the Head of Government, in charge of General Affairs and Governance
Ministry Delegate to the Head of Government, in charge of Civil Service and Modernization of Administration
Ministry Delegate to the Minister of Industry, Trade, Investment and the Digital Economy for Small Business and Integration of the Informal Sector
High Commission for Planning
Economic, Social and Environmental Council
Higher Council for Education, Training and Scientific Research
Competition Council
National Council for Human Rights

National Observatory of Human Development
Office for Professional Training and Labor Promotion
Moroccan Office of Industrial and Commercial Property
Office of Development Cooperation
National Electricity and Drinking Water Authority
Regional Office for Agricultural Development in the Gharb
National Fund for Social Security Organizations
National Agency for the Fight against Illiteracy
National Agency for the Promotion of Employment and Skills
National Agency for Health Insurance
National Agency for the Promotion of Small and Medium Businesses
Inter-ministerial Delegation for Human Rights
Regional Directorate of Marrakech Crafts
Tangier Delegation of Trade and Industry Tangiers
Marrakesh-Tansift-El Haouz Regional Academy of Education and Training
Casablanca Regional Investment Center
Tangier-Tetouan Regional Investment Center
Moroccan Agency for Solar Energy
National Centre for Scientific and Technical Research
Moroccan Innovation Center

Financial Organization and Banks

Bank Al-Maghrib (Central Bank)
Moroccan Securities Ethics Council
Savings and Management Fund (Caisse de dépôt et de gestion)
Central Guarantee Fund
Crédit Agricole du Maroc
Crédit Immobilier et Hôtelier
Banque Marocaine du Commerce Extérieur
Banque Centrale Populaire

Technical and Financial Partners and Other International Organization

Delegation of the African Development Bank in Morocco
Delegation of the World Bank in Morocco
Delegation of the French Development Agency in Morocco
Delegation of the European Commission in Morocco
Delegation of the United States Agency for International Development in Morocco

Private Sector

General Confederation of Enterprises of Morocco
Moroccan Confederation of Agriculture and Rural Development
General Confederation of Enterprises of Morocco-Northern Region
Professional Association of Financing Companies
Association of Women Heads of Businesses in Morocco
Investors' Association of the Tangier Export Processing Zone
Moroccan Association of Textiles and Clothing Industries
Moroccan Association of Intercontinental Road Transporters
Association of Cattle Breeders in Gharb
Artichoke Producers Association in Gharb
National Federation of the Milling Industry
Tangier Chamber of Commerce, Industry and Services
Tangier Textiles Operator (Vita Couture)
Renault-Nissan Tangier
Equipment Manufacturers in the Tangier Free Zone: Polydesign Systems Company and Snop Company Morocco
Sofitel Marrakesh
Abwab Consultants

Civil Society Organizations

ESPOD Association (Starting Point Space)
Alliance of Labor Training and Action for Children (ATFAL)
People's Bank Foundation
Democratic Association of Moroccan Women
Moroccan Association of Support for the Promotion of Small Businesses
Moroccan Organization for Human Rights
Young Entrepreneur Foundation
Moroccan Family Planning Association
Oyoune Nissaiya Observatory
Moroccan Association of Human Rights
Associative Space

Representatives of Trade Union Bodies

Academic Staff

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Karim Mohamed, Professor at the University Mohammed V - Rabat, Faculty of Law, Economics and Social Sciences
Nmili Mohammed, Professor at the Sidi Mohamed Ben Abdellah University - Fez, Faculty of Law, Economics and Social Sciences
Tounsi Said, Professor at the University Mohammed V - Rabat Faculty of Law, Economics and Social Sciences

Several Resource Persons

ANNEX 2.1: PRESIMO Model: Forecasting Scenarios for the Moroccan Economy

$$\frac{i}{k_{(-1)}} = 0,81 \left[\frac{i_{(-1)}}{K_{(-2)}} \right] + 0,04 \left[\frac{q - q_{(-2)}}{q_{(-2)}} \right] + 0,04 \times [\log(q/k_{(-1)})]$$

5,65
2,16
2,16

$$+ [0,12 \times (t_{marg}) - 0,01] - 0,01 \times (t_{it} - 100 \times @pch(pco))$$

1,38
-0,01
-2,92

$$R^2 = 0,95 \quad DW = 1,61$$

Source: Forecasting and simulation model (PRESIMO)

i = investissement

k = capital

q = valeur ajoutée

t_{it} = taux d'intérêt à long terme

t_{marg} = taux de la marge des entreprises

ANNEX 2.2: Correlation Test between Real Interest Rate and GDP Per Capita

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D_TAX_D_INTERNET_REEL	-0.057523	0.126677	-0.454093	0.6530
C	0.009124	0.003497	2.608760	0.0140
R-squared	-0.006826	Mean dependent var		0.008990
Adjusted R-squared	-0.026279	S.D. dependent var		0.019460
S.E. of regression	0.019714	Akaike info criterion		-4.954513
Sum squared resid	0.011659	Schwarz criterion		-4.862905
Log likelihood	81.27221	Hannan-Quinn criter.		-4.924148
F-statistic	0.206200	Durbin-Watson stat		3.073170
Prob (F-statistic)	0.653030			

ANNEX 2.3: Correlation Test between Real Interest Rate and Private Investment

Dependent Variable: DLN_INVEST_PRIV_				
Method: Least Squares				
Date: 10/14/13 Time: 20:14				
Sample (adjusted): 2 33				
Included observations: 32 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D_TAUX_D_INTERNET_REEL	-0.445242	0.211625	-2.103922	0.0439
C	0.006925	0.005843	1.185297	0.2452
R-squared	0.128578	Mean dependent var		0.005892
Adjusted R-squared	0.099531	S.D. dependent var		0.034706
S.E. of regression	0.032934	Akaike info criterion		-3.928167
Sum squared resid	0.032539	Schwarz criterion		-3.836558
Log likelihood	64.85067	Hannan-Quinn criter.		-3.897801
F-statistic	4.426489	Durbin-Watson stat		2.064516
Prob (F-statistic)	0.043873			

ANNEX 2.4: Granger Causality Test

Pairwise Granger Causality Tests			
Date: 10/14/13 Time: 17:43			
Sample: 1 30			
Lags: 4			
Null Hypothesis:	Std. Error	F-Statistic	Prob.
DLN_PIB_HAB_ does not Granger Cause DLN_CREDIT PIB_	25	0.84588	0.5165
DLN_CREDIT PIB_ does not Granger Cause DLN_PIB_HAB_		2.08196	0.1309

ANNEX 3.1: Ranking on Education System Quality, The Global Competitiveness Report 2013-2014

	Morocco	Tunisia	Jordan	Malaysia	Romania	Turkey
Primary education quality	118	72	44	33	85	92
Higher education and training	102	73	56	46	59	65
Educational system quality	110	71	27	19	99	91
Quality of studies in Maths and Sciences	52	31	30	27	57	101
Primary education enrolment	54	14	96	55	112	23
Secondary education enrolment	103	59	79	105	46	89
Higher education enrolment	106	71	70	62	39	46

Source: World Competitiveness Report 2013-2014

ANNEX 4.1: Stationarity Test of Certain Types of Infrastructure and Income Per Capita

The econometric analysis of time series always requires verification whether these series are stationary, in other words, when a series is stable around its average. For that, we carried out an augmented Dickey-Fuller test, without a trend, to verify the stationarity of the income per capita level, the number of road kilometers and the number of railway kilometers over the 1980-2011 period 1980-2011¹. In table

A, the Dickey-Fuller test shows that the series are not stable and the number of intervals corresponds to 4. It is impossible to reject the invalidity of a unit root; since the ordinary least squares (OLS) method is not valid. However, the Granger test can be conducted to verify whether infrastructure generates a higher income or vice-versa. The results of table B indicate that the link between road development and income

¹ Data from WDI (World Bank) and the Ministry of equipment.

per capita functions in the two directions. Table C indicates that railway development has helped to raise the income per capita

level. Nevertheless, these results are to be interpreted with extreme care, considering the very low number of observations.

Table A: Results of the Augmented Dickey-Fuller Unit Root Test

Dickey-Fuller				
		Critical value		
	Variable to be tested	1%	5%	10%
Log GDP/pc	0.801	-3.736	-2.994	-2.628
MacKinnon	<i>P approximate value for Z(t) = 0.9917</i>			
Log km_road	-1.348	-3.743	-2.997	-2.629
MacKinnon	<i>P approximate value for Z(t) = 0.6067</i>			
Log km_train	-0.889	-3.743	-2.997	-2.629
MacKinnon	<i>P approximate value for Z(t) = 0.7915</i>			

Note: Log GDP/pc, logarithm of the GDP per capita in PPA (in 2005 constant \$), log km, the logarithm of the number of road kilometres

Table B: Results of Causality Tests: income per capita and road kilometers

Granger causality Wald tests					
Equation	Excluded	chi2	df Prob > chi2		
Log PIB/hab	Log Km	20.447	4	0.000	
Log PIB/hab	ALL	20.447	4	0.000	
Log km	Log PIB/hab	11.413	4	0.022	
Log km	ALL	11.413	4	0.022	

Table C: Results of Causality Tests: income per capita and railway kilometers

Source	SS	DF	MS	Number of obs	=	32
Model	-827781431	1	-827781431	F (1, 30)	=	60.28
Residual	-411939666	30	-013731322	Prob > F	=	0.0000
Total	1.2397211	31	-039991003	R-squared	=	0.6677
				Adj R-squared	=	0.6566
				Root MSE	=	0.11718
Log PIB/hab	Coef.	Std. Err.	t	P>t	(954 conf. Interval)	
Log km	3.575819	0.4605469	7.76	0.000	2.635257	4.516382
_cons	-18.99783	3.475335	-5.47	0.000	-26.09541	-11.90025
Granger causality Wald tests						
Equation	Excluded		chi2	df Prob > chi2		
Log PIB/hab	Log Km		2.3598	4	0.670	
Log PIB/hab	ALL		2.3598	4	0.670	
Log km	Log Km		8.9281	4	0.063	
Log km	ALL		8.9281	4	0.063	

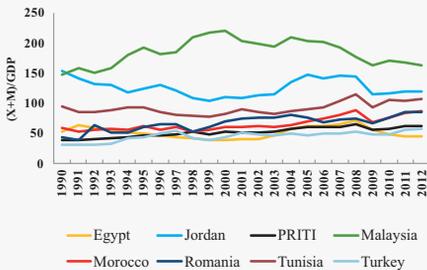
ANNEX 6.1: External Sources of Macroeconomic Risk

Despite outstanding performances for a number of exportable products, for about ten years now, foreign trade remains a weak point of the Moroccan economy.

The degree of openness of the Moroccan economy², 86% in 2012, is above that of all lower middle-income countries (LMIC) and comparable to that of Romania. Thus, Morocco is considerably exposed to international income fluctuations.

Exports are geographically concentrated and are characterized by lower-than-expected growth. Indeed, 63% of exports are shipped to Europe, while the index for exports of goods and services³ an increase in foreign sales equivalent to that of higher middle-income countries (HMIC), above those of Tunisia but far below countries which capitalized on their integration into the global economy such as Malaysia, Turkey and Romania (Figure A6.1).

Figure A6.1: Level of openness



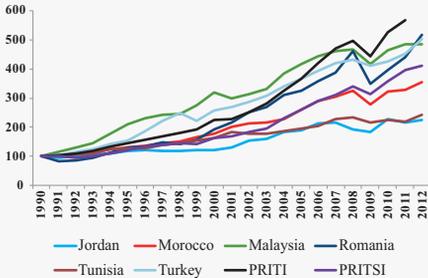
Source: WDI

As a percentage, the share of consumer (textiles) and food products in exports dropped sharply during the 2000s decade in favor of semi-finished products, fertilizers and phosphoric acids, and to a lesser extent, industrial equipment. This change reflects the country's industrialization process and, as concerns the decrease in exports of consumer goods, the expansion of domestic demand for this category of goods (Figures A6.2 and A6.3).

² $(X+M)/GDP$.

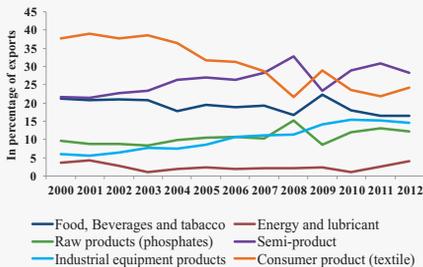
³ 1990 base year =100.

Figure A6.2: Export index of goods and services



Source: WDI

Figure A6.3: Main exported products

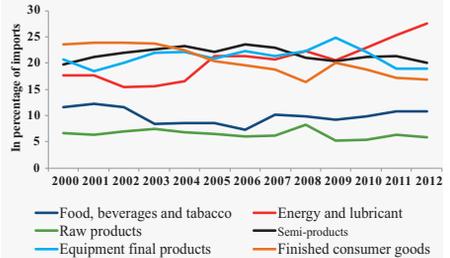


Source: Calculation of the direction of studies and financial forecasts, based on data from office des changes

With regard to imports (slightly over half of which originate in Europe), the structural vulnerabilities of strategic imports namely of energy products since 2009 and the recovery since 2007 of food products have affected the trade balance as a result of the

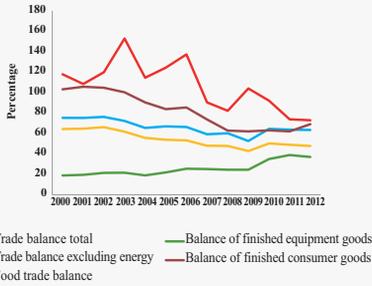
commodity price trend and also the subsidy policy pursued by the Moroccan authorities (a policy, however, undergoing serious reforms since mid-2013). In addition, as a corollary of the export trend in favor of capital goods, the share of imports of capital goods has tended to drop as in the case of semi-finished products and consumer goods (Figure A6.4).

Figure A6.4: Main imported products



Source: Calculation of the direction of studies and financial forecasts, based on data from office des changes

However, transformation of the structure of traded goods does not improve the foreign trade coverage rate. Even though coverage rates of the balance of finished capital goods and the trade balance, excluding energy, have improved since 2009, the serious deterioration of balances of agricultural products and consumer goods have induced a steady deterioration of the overall trade balance since 2000 (Figure A6.5).

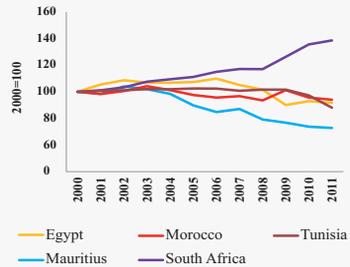
Figure A6.5: Foreign trade cover rate

Source: Calculation of DEFP on the basis of data from the Office des Changes

Indeed, the trade deficit is explained partly by the slow deterioration of the terms of trade during the past decade. However, it should be noted that, while the deterioration in the terms of trade affects many lower middle-income developing countries in a context of market instability, Morocco's terms of trade remain relatively stable (Figure A6.6) and comparable to those of other countries in the region.

From this perspective, exchange rate management illustrated by the depreciation of the real exchange rate and the possible depreciation of the nominal exchange rate seem consistent in light of the current structure of Morocco's foreign trade. However, the impact of a possible

acceleration of exchange rate depreciation to offset the deteriorating terms of trade is difficult to assess, the energy bill accounting for an increasing percentage of exports (Figure A6.7)⁴.

Figure A6.6: Terms of trade index 2000=100

Source: WDI

Figure A6.7: Export energy cost trend

Source: Direction of forecasting, Ministry of finance

⁴ The energy bill grew annually by about 3.16% over the period 2000-2012. A devaluation without a reduction in energy consumption would have as effect to increase imports and the export price, rapidly cancelling the impact of the devaluation all the more so as exports of semi-finished products (fertilizers, acids) require great quantities of energy for their production.

ANNEX 6.2: Balance of Payments Current Account Deficit Sustainability

1) Current Account Deficit Sustainability

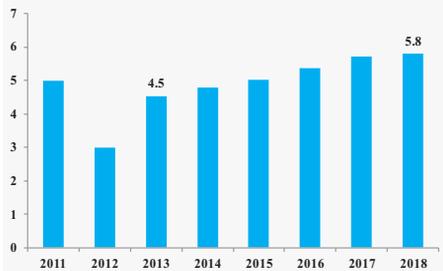
A current balance of payments deficit is sustainable if the value of the net foreign assets of the central bank and commercial banks guarantees the sum of updated values of future deficits⁵.

The fulfilment of this condition is subject to the formulation of a growth and inflation scenario, to be able to determine the deficit level as a percentage of the GDP of the trade balance and the current account balance compatible with the net foreign asset level reached before the 2008 financial crisis.

Moroccan authorities project an average annual potential growth rate of 5.5% between 2014 and 2018 (Figure A6.8). The inflation rate has been contained since the early 2000s and the continuation of the current monetary policy

must maintain price increases below 2.5% during the next three years (Figure A6.9). The objective of a stabilized current account deficit in the short-term at -5% of GDP due to the partial revival of activity in Europe, also seems realistic. These assumptions are consistent with the macroeconomic stabilization policies implemented by Morocco since the early 1990s.

Figure A6.8: Forecasts of real GDP growth rates in percentage



Source: HCP

⁵ The level of net foreign assets required is expressed as $NFA_0 = -NFA_T / (1+r)^T - CA_T / (1+r) CA_{T-1} / (1+r)^2 CA_{T-2} / (1+r)^3 \dots$ where CA designates the current account balance, NFA , net foreign assets and r the discounted rate (interest rate). In equilibrium net foreign assets must be equal to the sum of future discounted deficits. i.e. a current account balance to equilibrium long-term GDP (ca) equal to

$$ca = \frac{g + \pi}{(1+g)(1+\pi)} nfa_0(2)$$

Où $ca = \frac{CA}{GDP}$ et, $nfa_0 = \frac{NFA_0}{GDP}$ g et π désignent respectivement le taux de croissance en volume et le taux d'inflation

where $ca = \frac{CA}{GDP}$, and, $nfa_0 = \frac{NFA_0}{GDP}$ and π respectively designate the growth rate in terms of volume and the inflation rate.

Figure A6.9: Inflation, consumption price (annual percentage)

Source: World Bank

Based on this scenario, the reduction of the current account deficit to its 2004 level, the deficit acceleration year, and the rebuilding of net foreign assets to their level of 2007, requires, a substantial increase in external debt in order to close the sustainability gap. External debt is expected to return to its 2003 level of about 36% of GDP compared to 29.3% in 2011⁶.

Table A6.1: Reduction of the current balance of payment deficit

Simulation of return to a sustainable current account balance (-5 %) in 2014	2014	2015	2016
Growth rate	5%	5.5%	5.5%
Inflation rate	1.9%	2%	2.5%
Real interest rate	1.9%	2.5%	3%
Net foreign assets (% GDP), 2007	34.5%	34.5%	34.5%
Net foreign assets (% GDP), 2012	19.3%	19.3%	19.3%
Current account balance (% GDP) stabilising the external position in 2007	2.2%	2.5%	2.6%
Balance of goods and services (% GDP) stabilising the external position in 2007	-0.3%	-0.5%	-0.4%
Increase in external debt with a current account deficit of -5% and Net foreign assets of 2007	36.5%	36.8%	36.9%
Current account balance (% GDP) stabilising the external position in 2012	1.2%	1.3%	1.4%
Balance of goods and services (% GDP) stabilising the external position in 2012	-0.6%	-0.5%	-0.4%
Increase in external debt with a current account deficit of -5% and Net foreign assets of 2012	35.5%	35.6%	35.7%

Source: Authors' calculations

⁶ This simulation does not take exchange rate variations into account.

A. Current Balance of Payment Equation

The current balance of payment seems, according to econometric tests and despite the small number of observations (32 years of the period 1980-2012), to be co-integrated⁷ with investment, net foreign assets and the real effective exchange rate. According to the econometric valuation, a one-point increase in the investment rate, with a constant savings rate, would weaken the current payment balance by 0.68 points whereas a one-point increase in net foreign assets, possibly through borrowing, would improve the current balance by 3.26 points.

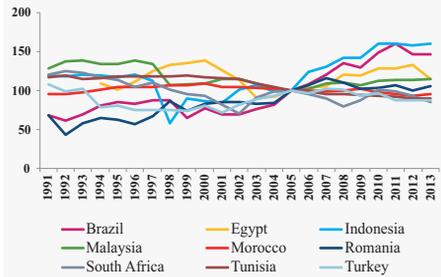
B. Equilibrium Real Effective Exchange Rate

The real exchange rate in a controlled floating exchange rate regime is not a direct determinant of foreign balance but rather an indicator of the price

competitiveness of the economy.

Regular depreciation (decrease in the real exchange rate), since 2005, enhances Morocco's foreign competitiveness vis-à-vis the comparator countries (Figure A6.10). Nevertheless, overvaluation (or undervaluation) of the real exchange rate can only be appreciated relative to the long-term equilibrium value.

Figure A6.10: Real exchange rate 2005=100

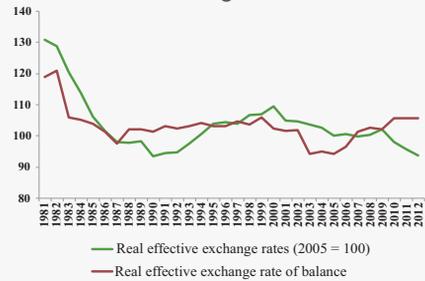


Source: Market Data, World Bank

⁷ Johansen Tests and co-integration regression.

It follows from the co-integration study (see Annex 6.3) that the equilibrium real effective exchange rate (REER) depends on the gap between investment and savings, foreign assets and terms of trade. With respect to the long-term balance between 1996 and 2007, the REER observed was probably overvalued, but since 2011, it seems undervalued, which contradicts the idea of a current overvaluation of the dirham.

Figure A6.11: Equilibrium real effective exchange rate



Source: Market Data World Bank and authors' calculations

ANNEX 6.3: Johansen Co-integration Test, Real Exchange Rate

Hypothesized N°. of CE (s)	Eigenvalue	Trace Statistic	Critical Value 0.05	Prob.**
None*	0.712409	77.17830	63.87610	0.0026
At most 1	0.519522	39.79180	42.91525	0.0992
At most 2	0.382486	17.80260	25.87211	0.3573
At most 3	0.105390	3.341010	12.51798	0.8338
RER	AEN	TOT	INV/EPAR	TREND
-0.080465	-1.603532	-6.853374	-9.528856	0.212313
0.133813	0.416624	-4.587855	1.416260	-0.089753
0.021805	-0.470780	25.79473	8.628047	0.119459
-0.159282	-0.382925	7.569468	8.604123	0.009865
Unrestricted Adjustment Coefficients (alpha):				
D (INDICE_DU_	-0.898683	-1.582334	-0.204693	0.248100
D (AVOIRS_EX	0.515093	-0.084429	0.396870	0.151402
D TOT)	-0.004207	0.025868	-0.012309	0.009168
D (RATIO_INVE	-0.382925	-0.058393	-0.018871	-0.011450
1 Cointegrating Equation (s):		Log likelihood	-8.302137	
Normalized cointegrating coefficients (standard error in parentheses)				
RER	AEN	TOT	INV/EPAR	TREND
1.000000	19.92839 (2.29079)	85.17240 (47.6110)	118.4228 (32.7071)	-2.638585 (0.44116)
Adjustment coefficients (standard error in parentheses)				
D (IND)	0.072312 (0.03969)			
D (IND)	-0.041447 (0.01423)			
D (IND)	0.000339 (0.00082)			
D (IND)	-0.002807 (0.00158)			

ANNEX 7.1: Land Tenure Systems

- **“Guich” land tenure**

“This is land that the Makhzenian State had transferred to tribes for use in return for a military-type service rendered. They are found, most often, in protection areas around imperial towns: Meknes, Fez, Marrakesh, and Rabat”.

- **Collective land tenure**

“These are tribal territories, transformed by the protectorate legislation (Dahir of 27 April 1919, still in force) into the inalienable property of ethnic communities, subjected to the supervisory administrative authority of the Ministry of Interior”.

- **“Melk” land tenure**

This refers to real estate governed by Malekite-rite Muslim law. The latter is most

often equated, in contrast with State and tribal property, to Roman law private property (*usus, abusus, fructus*), that which most often is presented as inseparable from the advent and development of capitalism.

- **“Habous” property**

“Habous is a legal deed by which a person, in order to please God, divests himself of one or several of his assets, generally real estate, and puts them out of business, by allocating them permanently to religious, charitable or social work, in an absolute manner exclusive of any restriction (public Habous), or by reserving the use of these assets to one or several determined persons (family Habous); at the death of beneficiaries, family Habous becomes public Habous” (Luccioni J., 1945).

ANNEX 8.1: Composition of the Export Basket, 1995 and 2010



Source: The Observatory of Economic Complexity

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