

International Investments in Agriculture in the Near East

**Evidence from Egypt,
Morocco and Sudan**

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ISBN 978-92-5-107039-0

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Abbreviations

AAID	Arab Authority for Agricultural Investment and Development
ACOLID	Arab Company for Livestock Development
ANIMA	Euro-Mediterranean Network of Investment Promotion Agencies
AOAD	Arab Organization for Agricultural Development
BIT	Bilateral Investment Treaty
COMESA	Common Market for Eastern and Southern Africa
CPA	Comprehensive Peace Agreement for Sudan
DTT	Double Taxation Treaty
EAA	External Assistance to Agriculture
EACCE	Etablissement Autonome de Coordination et de Contrôle des Exportations
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FDI	Foreign Direct Investment
FI	Foreign Investment
FIAS	Investment Climate Advisory Services, The World Bank Group
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GNI	Gross National Income
GOM	Government of Morocco
IAV-HII	Institut Agronomique et Vétérinaires Hassan II
ICSID	International Centre for the Settlement of Investor Disputes, The World Bank Group
ILO	International Labour Organization
IMF	International Monetary Fund
LAS	League of Arab States
MAD	Moroccan Dirham
MENA	Middle East and North Africa
MIGA	Multilateral Investment Guarantee Agency, The World Bank Group
MIPO	Mediterranean Investment Project Observatory
ODA	Official Development Assistance
OMPIC	Moroccan Office of Patent and Commercial Property
ORMVA	Office Régional de Mise en Valeur Agricole
PPP	Purchasing Power Parity
SODEA	Société de Développement Agricole for Morocco
TRIPS	Agreement on Trade-Related Aspects of International Property Rights
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VAT	Value Added Tax

Acknowledgements

We gratefully acknowledge the valuable inputs of many people from both within FAO and externally, as well as the effort of all the case study authors for their role in data collection and analysis. We would also like to thank AbdelAziz Al-Howaish, Director of the External Relations and International Cooperation at the Ministry of Agriculture, Saudi Arabia and Abdul Dafei Othman at the Ministry of Investment, Sudan, for their comments and feedback in the finalization of the case studies. We also thank Dahlia Radwan and Mona Mohamed for their assistance in facilitating the publication process. Finally, we would like to acknowledge the valuable assistance of Shihab Al-Shami in data analysis and review and of Machal Karim in editing and finalization of this publication.

Executive Summary

The food crisis of 2007- 2008 sparked an increase in investment flows to agriculture in the Near East, particularly to countries rich in water and land resources, such as Sudan. These investments have continued to increase during 2009 - 2010, as food prices continue to remain high.

This publication was motivated by this surge in international investments in agriculture, and the need to answer some key policy questions, through a brief review of international investments in the region, and an exploratory analysis of the issues and challenges in the policy arena. Three case studies in Egypt, Morocco and Sudan were commissioned by the FAO Regional Office for the Near East. The purpose was to (i) identify past and current investment trends in terms of the actors involved, modalities, size and impact (to the extent that information is available), (ii) assess these investments in the context of the region and its food security challenges, and (iii) identify areas to be addressed by policy makers to ensure food security in the long run and provide a starting point to evaluate investments for timely and targeted policy measures. While information on international investments in agriculture is not readily available, the case studies provide an overall picture of agriculture investments, specifically focusing on foreign direct investments.

The share of international investments to agriculture has traditionally been very low in the region. With an average share of 1-2% of total FDI, this investment is mostly concentrated in sectors other than primary agriculture. In the past few years, investments in agriculture have grown remarkably; however, information on their allocation and impact is incomplete and fast changing.

Impacts of agricultural investments in the past have been mixed and concentrated in capital and resource intensive activities which are largely supported by the public sector. Sudan has attracted resource seeking investments, whereas Morocco and Egypt continue to be investment destinations for market seeking investments, in the food processing and fruit and vegetable production sectors. The involvement of the private sector in investment in agriculture is growing but there is still a strong government presence in supporting these investments, often through direct and indirect subsidies in most countries. The historical experience of the region is instructive in terms of improving the efficiency of future investments in agriculture as well as ensuring sustainable outcomes.

Some of the salient features of international investments in agriculture can be summarized as follows:

- Intra-regional investment in agriculture constitutes the bulk of the international investment in agriculture in the Near East.
- Countries such as Egypt and Sudan are the largest recipients of recent

international investments in food and agriculture, mostly from the Gulf States but also from other countries such as China and South Korea. Other countries in the region are also heavily investing in agriculture and food sectors overseas, and beyond the Near East, including in Asia and Latin America.

- Whether investor or host country, the common driving factor for international investments in agriculture in the region is food security concerns.

The investment policies of most countries in the region are geared toward attracting investments. They are therefore relatively open and do not differentiate between the different sectors or the different types of activities within agriculture. Agriculture, as an investment category, has been growing rapidly in the last three years, and most countries (especially the poorest) have not yet had the time to align their investment strategies with their national food security objectives. Given the rapid growth in agricultural investment, caution needs to be exercised by investor and host country governments, as well as private investors, to develop sustainable solutions and incorporate a long term perspective to support healthy and profitable investments.

Given the diverse national and household food security concerns and resource availabilities, a regional focus on food security may be needed to better formulate and harmonize policies as well as tap into opportunities. The potential capacity for staple food production has its limits, but income generating opportunities are ample. A mix of investments geared at food processing, food service, and other sectors linked to agriculture, could also provide alternative income opportunities for rural people, as well as increased employment opportunities in urban areas. Within this context, regional initiatives could be very promising in promoting food security in the longer term.

An Overview of International Investments in Agriculture in the Near East¹

Ayşen Tanyeri-Abur, Nasredin Elamin

1. Introduction

1.1 Background and Overview

Following the food crisis of 2007 - 2008, an increasing amount of private and public funds are being directed toward agriculture in the Near East², coming from many parts of the world, but primarily from the region itself. Investing in food production abroad is seen as one way to address the increasing uncertainty in world markets, driven by the food import dependency within the region. How the resources generated by these investments will be used and to what extent they will help in addressing the diverse food security concerns of the region remains to be seen. Nevertheless, it is certain that well-targeted and properly timed policies are needed to ensure that these funds contribute to broad-based development and improved food security within the resource constraints of the region, while ensuring a favourable investment destination for investors.

Increased public and private investment in agriculture is key to alleviating food insecurity and poverty in many parts of the world, and the Near East region is no exception. Agriculture represents the backbone of the economy in many countries in the region, with strong linkages to other sectors. Improving the productivity of agriculture is an important step toward increasing incomes in rural areas, as well as achieving overall economic development. A vibrant and productive agricultural sector will fuel in additional investments, as most of the needed investments in agriculture are expected to come from private sources, and primarily from farmers themselves (FAO, 2002, p. 59). Public investments in agriculture are also crucial but are lagging behind, both at national and international levels.

The events of the past couple of years, including the spectacular increase in food

¹ A different version of this paper has been published in Food Security, Volume 3, Supplement 1, February 2011, pp. 115 -127(13). Springer. Views expressed in the paper are those of the authors and do not reflect the views of the Food and Agriculture Organization

² Because of data availability, Near East countries in this paper comprise: Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Syria, Saudi Arabia, Sudan, Tunisia, United Arab Emirates, Yemen.

prices in 2007 and the ensuing financial crisis, resulted in higher levels of food insecurity in already poor and suffering nations and in wealthier countries which rely on food imports. On July 10 2009, the G-8 countries announced a pledge of \$20 billion toward increased food output. It is not clear how this commitment will be delivered, but it will certainly give an additional boost to private investment in agriculture in developing countries, including in the Near East region.

The Near East region is particularly important within this backdrop, as the dynamics of agricultural investment are unfolding at an unprecedented rate and pattern. The region is unique in that some of the wealthiest countries in the region have concerns about national food security. As a result, they are investing in primary agriculture in other countries within the region that are rich in land and water resources but are also suffering from poverty, chronic food insecurity, both at national and household levels. Intra-regional investments, particularly in agriculture, are growing amidst the global financial crisis and the expected lower levels of foreign direct investment³ (FDI) inflows from developed countries (IMF, 2009).

Past international investments in agriculture, going back to the 1970s, have not resulted in expected improvements in food security and economic growth, particularly for the poor countries in the region, such as Sudan. Rapid rates of urbanization and past economic growth based on extravagant use of natural resources have created challenges and food security problems for several countries in the region, which are expected to continue in the future. Similar to the 1970s, wealthy countries which are poor in agricultural resources are looking beyond their borders in search of these resources. This may put further pressure on resource availability in the region. Investments in agriculture create new food and agricultural systems that have repercussions throughout the economy, which necessitates a broader and more comprehensive policy approach.

1.2 Recent Developments in Agricultural Investments in the Region

The recent surge in international investments in agriculture in the Near East region makes it all the more urgent to develop an effective framework for policies. The unprecedented growth in investment in agriculture is in large part a result of the food crisis of 2007, which brought about a rethinking of agricultural support policies, mostly in countries of the Gulf and particularly Saudi Arabia, which has invested heavily in the last 30 years in large-scale agricultural production using up valuable water resources (Elhadj, 2008).

Saudi Arabia announced in January 2008 that it would phase out wheat and agricultural production in the course of the next eight years (Reuters, 2008). Qatar and UAE took similar policy decisions. In July 2008, Qatar and Sudan

³ The terms "international investment" and "foreign direct investment (FDI)" are used interchangeably throughout the document.

agreed to establish a joint company to focus on investments in the food, agriculture and livestock sectors (Sudan Tribune, 2008). In August of 2008, UAE announced it was investing in 900,000 acres across several Sudanese states and mentioned a project covering 40,000 acres to produce wheat, maize and fodder (SudanTribune, 2008). Many other land deals and investment projects have been negotiated in other countries⁴. Recent estimates indicate that the Gulf Cooperation Council (GCC) investors have also increased their investment in the region, where around 25% of their oil wealth is now invested within the region, compared to 15% in 2003 (Oxford Analytica, 2009).

Intra-regional FDI is an important component of foreign investments in the region, estimated to be about three times more than the value of average intra-regional trade in agriculture in the past two decades (Bolbol, 2005). Intra-regional investments constitute about one-third of all investment flows to agriculture in the Near East countries, and have been growing rapidly since 2007, with an increase of 64%, reaching a total of about \$US 34 billion in 2008 (Halawi, 2009).

One particular aspect of these new investments is the extent of private sector involvement. Most of the investments are driven by private sector initiatives although the states have a heavy presence in terms of support and facilitation. In contrast to the recent investments in agriculture, agricultural investments in the 1970s and 1980s were driven by public sector funds and devoted to a few large scale projects. Today, various entities and modalities are shaping the investment landscape. New specialized investment entities (such as AgriCap⁵) are formed to facilitate regional investments, many companies are directly (or through mergers) investing in agriculture and food sectors, and sovereign states/funds are investing in agriculture directly. In addition, investment support to private sector (buy-back guarantees, logistics, insurance etc.) is provided by governments (e.g. \$800 million by Saudi Arabia to support agricultural investments (Reuters, 2009)). In some instances, large private companies have come together as to establish joint investment companies (e.g. Jannat from Saudi Arabia (Financial Times, 2009)).

Another important characteristic of these investments is that the country with the one of the highest levels of food insecurity⁶ (after Djibouti and Yemen) is also the country where most of these investments are destined, namely Sudan. Given that agriculture is the main income generating sector for the poor and many rural poor live on the lands that are destined to be part of these investment projects, Sudan faces the critical problem of taking steps to ensure that these investments are supportive of broad based agricultural development, and particularly of

⁴ These countries include, inter alia, Kazakhstan, Ukraine and Indonesia. For a review of recent land deals see Cotula, L., Sonja Vermeulen, Rebeca Leonard and James Keeley. (2009). Land grab or opportunity? Agricultural investment and international land deals in Africa. FAO, IFAD and IIED.

⁵ <http://www.agricap.com/>

⁶ The level of food insecurity is measured as the proportion of undernourished in total population

improved food security.

The paper is organized as follows: The next section highlights the major development challenges in the region, both in historical and future contexts. Section 3 provides an overview of investment in agriculture in the region and summarizes past investment trends, focusing on Egypt, Morocco and Sudan. The paper concludes with some reflections on food security implications and policy recommendations.

2. Ecological, Demographic and Economic Challenges

The Near East region is characterized by a mix of very different countries, resources and incomes. The total area covered by the 21 countries in the region is vast, spans an area from the Atlantic Ocean to the Indian Ocean and is spread over widely diverse lands in terms of water and land resources. Moreover, several countries in the region sit on the largest fossil fuel reserves in the world.

GDP per capita ranges from over \$85,000 in Qatar to just around \$2,000 in Mauritania. The wealth in the richer countries of the region is primarily dependent on oil revenues and the past economic growth has been closely linked to the oil market (UNDP, 2009). About 43% of regional GDP is concentrated in the high income countries (Qatar, Kuwait, UAE, Saudi Arabia, and Bahrain)⁸ which are home to only 11.8% of the population in the region (UNDP, 2009). Food insecurity varies sharply in the region but overall the percent of undernourished population does not exceed 57% - in most countries of the region, except for Sudan, Mauritania, Djibouti and Yemen where the proportion of undernourished exceeds 25%⁹.

The countries in the region however, are largely similar when it comes to the challenges in achieving sustainable agriculture and food security. For most of the countries in the region, the overwhelming concern is to secure adequate and stable supplies of food at the national level, making food security a concern for both rich and poor countries of the region.

The three major problems affecting most of the countries are (i) limited water availability (ii) population growth and (iii) heavy dependence on food imports.

Water scarcity

⁸ World Bank definitions for high, upper and lower middle income and low-income are adopted for the following average per capita GNI for 2007 \$US PPP: low income (\$2,152), lower middle income (\$5,343), upper middle income (\$14,045) and high income (\$27,934).

⁹ These averages do not include countries in protracted conflict (Iraq, Palestine and Somalia) for which data is unavailable.

¹⁰ According to definitions/classifications of the UNEP.

The Near East region is characterized by large differences in land and water availability. Water scarcity in particular, is the most critical development problem in the region and the single most important factor in limiting agricultural growth. Water availability in the region has been declining steadily since the late 1950s. Out of the 19 countries in the region, only four countries are classified as “water abundant” (availability of water is higher than 1700 m³/inhabitant/year). Twelve of the 19 countries are characterized as having acute water scarcity¹⁰. These figures, compared with a global average of 5000 m³ per inhabitant per year show how severe the water scarcity problem of the region is. The Nile basin, the most productive and water rich area in the region, had an average of 2200m³/per capita /per year in 1995 which is expected to drop to 1000 - 1700 m³/per capita/per year by 2025 (Revenga, 2000). Both Egypt and Sudan are in the Nile basin, and agricultural productivity and growth in these countries is highly dependent on water availability in the future. Three quarters of the arable land in Egypt is in the fertile ‘old lands’ in the Nile valley and delta; the remaining 25 percent represent ‘new lands’ in reclaimed desert regions, largely dependent on underground water resources (FAO, 2009b).

The extent of water scarcity is even more evident when we look at the 30 year history of water usage in the region. Table 2.1 shows water availability in 1958-1960 compared to the 2003-2007 averages. The region as a whole has 70% less availability of renewable water per person in 2003-2007 than in the period 1958-62. It is important to note that the wealthiest countries are also those with the highest water depletion record, namely, the United Arab Emirates and Qatar.

Table 2.1 Water resources in selected countries in the Near East region:

Countries	1958 -1962 (m ³ /inhab/year)	2003 -2007 (m ³ /inhab/year)	2007 Water levels as percent of 1958 water availability (%)
United Arab Emirates	1376	33	2.4
Qatar	1000	65	6.5
Saudi Arabia	554	98	17.6
Bahrain	682	160	23.4
Syrian Arab Republic	5346	1379	25.8
Iraq	9659	2618	27.1
Sudan	5344	1780	33.3
Algeria	1041	355	34.1
Mauritania	10888	3715	34.1
Morocco	2363	921	39.0
Egypt	1991	787	39.6
Tunisia	1050	455	43.3
Lebanon	2200	1232	56.0
World	55393	16607	30.0

Source: FAO AQUASTAT

total renewable per capita*Population growth and urbanization*

In 2005, population was 3.4 times the 1960 levels and is expected to almost double by 2050 with 67% living in urban areas (UN, 2008). The high rate of population growth widens the food demand/food availability gap and creates other problems such as a very large young population with an insufficient number of available jobs, as employment growth lags behind. New income generating opportunities are essential to absorb the growing number of unemployed youth (ages 15-24) which was around 27 percent for males and 33 percent for females in 2005 in the Middle East and North Africa (MENA) region. With an average percent of unemployed youth at 26%, MENA represented the highest rate among all regions. (18%, 16%, 8% for Sub-Saharan Africa, Latin America and East Asia, respectively) (ILO, 2006, Annex I)

Over the past ten years, the region experienced rapid urbanization which is expected to continue in the near future. Out of a population of about 300 million, 170 million reside in urban areas. In North Africa alone, the percent of the population living in urban areas will exceed 70% in 2050. In Sudan, the rural population will fall from 23.4 million to around 18 million in 2050 while the urban population will grow from 26.3 to over 54 million in 2050. Most of these people will be displaced workers, pastoralists and farmers from rural areas.

The poor in urban areas are particularly vulnerable in terms of food security, not having the option of producing their own food. Feeding an urban population creates additional demands on the food system. This is an issue that needs to be addressed in terms of the food security impacts of investments in agriculture and food sectors, both in terms of incomes earned and jobs created through these investments, as well their impacts on migration to urban areas.

Heavy dependence on food imports

The extent of import dependency in food reflects some major problems with the food systems in many countries of the region. Several reasons have contributed to increased dependence on food imports, which is significant in most of the countries of the region. Agriculture in the region is low in productivity and the region also has scarce and deteriorating quality of water, land and natural resources. This is due to the geographic characteristics of the region as well as frequent incidence of drought, natural disasters and transboundary animal and plant pests and diseases. Another important factor in the increased dependence on food imports is the continuous shift in consumption patterns away from locally produced grains (sorghum, millet, etc.) into imported grains mostly wheat, rice and barley. In addition, heavy subsidies are prominent in many countries and long lasting protection has distorted agricultural incentives.

The region has a history of large public investments to agriculture and heavy subsidies in some countries with open policies in others. These public investments

were largely geared toward developing infrastructure such as dams (Aswan dam in Egypt), sugar production in Sudan (Kenana sugar company) or establishing modern agricultural systems (intensive livestock and grain production in Saudi Arabia in the 1970s and 80s (see Elhadj, 2008). While these investments were crucial in creating food production capacity in the region, the sustainability and effectiveness of the investments are questionable, and there is little evidence that these investments have reduced food imports or dependency on external markets. Investments were largely geared toward self-sufficiency resulting in production systems which needed to be subsidized through provision of cheaper inputs, inaccurate pricing of natural resources, or direct subsidies. This has exacerbated food security problems of today, where new systems need to be developed to ensure food security in the wake of the food price crisis and the financial crisis of the last two years.

In the last 30-40 years, food imports in the region have risen much more than the world and developing country averages; from over 100 times in UAE to around 20 times in Yemen (Table 2.2). Food import quantities in eleven countries (which include Sudan) have risen much over the developing country average of 5.4 for the same years. Egypt has continued to be the largest food importer in the region.

Table 2.2 Cereal imports in selected countries 1960- 2005 (000 metric tons)

Countries	1961 - 63	1980 - 82	2003 - 05	Ratio of 2003 -2005 to 1963- 65
Egypt	1,837	1,842	8,609	4.7
Morocco	423	557	4,174	9.9
Sudan	107	219	1,551	14.5
Saudi Arabia	323	427	6,282	19.4
United Arab Emirates	21	69	2,255	109.5
Developing Countries	31,950	42,493	173,616	5.4
Developed Countries	53,055	80,164	122,624	2.3
World	85,006	122,657	296,240	3.5

Source: FAOSTAT

Food import dependency is a continuing issue in the region which has worsened in the past 25 years with the sharp increase in food imports in all countries between 1980 and 2005 (Table 2.2). Shares of food imports value of total imports vary by country depending on imported goods, but the dependence on food imports is more visible for the wealthier countries. The food import bill of most countries in the region is expected to grow at a fast pace and the agricultural trade deficit is expected to reach \$40 billion by 2050 ¹¹.

¹¹The figures for the agricultural trade deficit include oil exporting countries. If these countries were left out, estimates would be much higher.

A careful look at imports reveals that the largest growth in food imports since the 1960s is in barley and maize (Table 2.3). In 2000-2005, barley and maize represented more than 60% of the supply of cereals in the region. This implies a strong upward trend in the demand for feed grains (mainly barley and maize), reflecting the changing pattern of agricultural production systems. Table 2.3 shows imports by category since 1960. Wheat remains the most important food crop and imports of wheat have remained at about half of total supply.

Table 2.3 Share of imports in total supply of cereals, 1960 - 2005

	1961 - 63	1981 - 83	1981 - 83	1991 - 93	2000 - 05
Cereal imports as percent of total imports					
Barley	13%	9%	53%	48%	65%
Maize	10%	11%	49%	47%	63%
Rice (Milled Equivalent)	25%	27%	44%	44%	44%
Sorghum	0%	0%	1%	5%	5%
Wheat	40%	44%	67%	55%	55%
Total quantity imported (million metric tons)	13	21	71	90	265
Imports as % of total cereal supply	29.1%	32.2%	61.8%	54.1%	60.9%

Source: FAOSTAT

Looking at individual countries, there are large differences in terms of use of the various cereals for either feed or food, as well as the increase in import quantities over time. For example, Sudan in 2000-05 imported 100% of its barley supply and over 50% of its maize supply compared to the 1960's when maize imports were 0% (FAOSTAT). Today, Sudan, which is considered as one of the countries in the region with the most potential for food production, imports 32.6% of its cereals (FAOSTAT). In 2000-2005, Saudi Arabia imported almost all of its barley, maize and rice from other countries, accounting for more than 70% of its supply of cereals (FAOSTAT). The evolution of food imports and the reasons for these increases are beyond the scope of this paper, but important for the future direction of agriculture and food security in the region. Heavy dependence on feed based systems, or food systems based on imports may be one area that merits a closer look so that new investments could be geared toward areas of higher return without exacerbating existing import dependency rates in the region.

3. Overview of Investment in Agriculture and Related Policies in Near East Countries

The high dependence on food imports makes the region highly vulnerable to fluctuations in international prices. Therefore, the countries in the region are concerned not only with high dependence on food imports, but also with the progressively rising trend in food prices, high short-term fluctuations and the increasingly reduced capacity to pay for the required food imports. Increased investment in agriculture and food production and market capacity through the full exploitation of existing potential is crucial for addressing the food security problem in the region.

Assessment of investment in Near East agriculture is constrained by available data. In most countries, data are particularly scarce on FDI flows and, when available, tends to be underreported. The exploratory studies conducted by FAO in Egypt, Morocco and Sudan (Salem 2009; Jaouad, 2009; Nur, 2009) shed some light on the nature of FDI in terms of past flows, sectoral allocation and policies. The three cases analysed in this paper reflect three distinct types of FDI flows: resource, market and service seeking investments. Most resource-seeking investments are geared toward Sudan while Egypt and particularly Morocco are destinations for market and service-seeking investments.

This section first reviews public and private investments in agriculture, both in the past and in recent years, and mainly in the three selected countries. While public investment is an important component of agricultural development, FDI flows represent an important part of private investments, which are ultimately the most important component of agricultural growth.

3.1 An Assessment of Investment and in Agriculture

Agricultural investment in the Near East region has been driven by public investments in the past. Most of these investments have been in large projects, and were supplemented by private investments both domestic and international. Some countries in the region have made measurable progress in their agricultural productivity and overall growth in the agricultural sector. Nevertheless, in many countries agriculture still lags behind other regions in terms of productivity.

The heavy public investment in agriculture in many countries of the region has resulted in increased agricultural growth in some countries with increased irrigation and fertilizer use along with widespread use of improved crop varieties. A significant portion of the investments in agriculture in the region have come primarily from the public sector and mostly through large projects, often poorly conceived, yielding lower than expected rates of return. Much of these large projects did not effectively take into account the resource scarcities and the related social and environmental impacts. In addition, subsidies on consumption and production have distorted markets. As a result, that investment in agriculture

over the last three decades has not resulted in desirable impacts with regards to food security and more sustainable resource use in the region.

Investment is generally measured as the incremental change in capital stock from one period to the other. The value of agricultural capital stock and its yearly change is a proxy estimate of investment, though the methodology it is based on is not very robust, primarily with the difficulties involved in valuation of the various categories of capital stock. However, it is the only source of information that can provide a working ground on agricultural investments.

Data on capital stock in agriculture is compiled by FAO and comprises livestock, land improvements¹², machinery and structures.

Sudan boasts the highest level of capital stock in the Near East region worth \$85 billion in the period 2005-2007, followed by Egypt, Syria and Morocco. In terms of change over time, Sudan has also shown progress, almost doubling its capital stock from 1975-77 to 2005-2007. Change in capital stock has remained relatively constant over time for Egypt and Morocco. Saudi Arabia has almost quadrupled its capital stock from \$5.8 billion to \$20.9 billion in the same forty year period (Table 3.1).

Table 3.1 Capital stock (\$US millions constant 1995)

Country Name	1975 - 77	1985 - 87	1995 - 97	2005 - 07
Sudan	46,682	52,471	68,907	84,606
Egypt	26,271	25,549	34,325	37,169
Morocco	20,099	20,903	21,504	23,986
Saudi Arabia	5,856	15,330	20,745	20,916
Syrian Arab Republic	12,010	14,650	20,127	24,487
Tunisia	8,763	10,013	11,262	12,025
Yemen	5,655	5,802	8,037	10,504
Libya	4,468	5,777	7,307	7,112
Mauritania	993	1,226	1,380	1,747
United Arab Emirates	555	753	1,119	2,968
Oman	524	740	1,028	1,205
Qatar	37	103	230	203
Djibouti	115	167	205	221
Kuwait	57	126	176	297
Bahrain	19	21	58	55

Source: FAO

¹²Land improvements include: Land clearing, flood protection, drainage, land grading, physical, chemical and organic aids and amendments and reclamation leaching (FAO, 1985).

A closer look at the breakdown of capital stock at the sub-sectoral level (Table 3.2) reveals that the largest component of the existing stock of capital in agriculture is in land and livestock (particularly in the case of Sudan). Machinery and other infrastructural capital represent less than 1% of total capital stock in Sudan, which has not changed over time. These figures are similar for the other countries with regard to structural capital, but machinery represents around 3% of capital stock in Egypt, Saudi Arabia and Morocco.

Table 3.2 Capital stock by category (as % in total)

	1975 - 77	1985 - 87	1995 - 97	2005 - 07
Land % in total				
Sudan	39.7	36.6	31.5	25.9
Morocco	64.0	70.3	71.5	71.4
Egypt	83.9	80.4	78.0	76.5
Saudi Arabia	80.8	86.2	86.6	88.2
Machinery % in total				
Sudan	0.4	0.4	0.3	0.9
Egypt	1.7	2.5	2.7	2.8
Morocco	2.4	3.5	3.9	3.6
Saudi Arabia	1.5	1.4	2.4	2.6
Livestock % in total				
Egypt	17.0	20.8	24.3	26.6
Morocco	51.7	36.4	33.6	34.2
Sudan	59.7	62.7	67.7	72.7
Saudi Arabia	17.2	11.9	10.5	8.9
Structure % in total				
Egypt	0.2	0.3	0.3	0.3
Sudan	0.3	0.3	0.4	0.4
Morocco	0.6	0.6	0.6	0.6
Saudi Arabia	0.5	0.4	0.4	0.4

Source: FAO

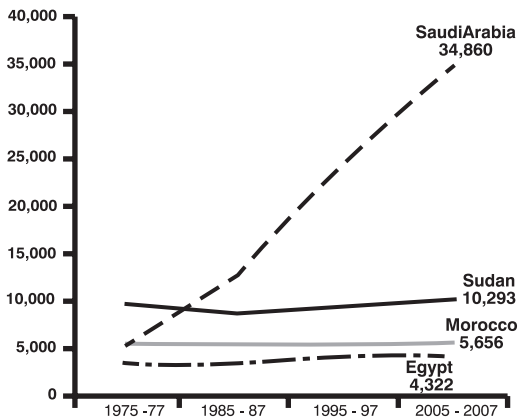
Capital intensity in agriculture shows a wide range of differences across the countries. Measured as capital stock per agricultural worker, Figure 3.1 compares capital intensity in four countries for which data were available. As seen from the figure, capital stock to labour ratio in Saudi Arabia in 2005-2007 was more than 10 times higher than in Egypt and almost triple that of Sudan.

The diversity in capital stock per labour is also reflected in low agricultural productivity per worker¹³ over time, as shown in Table 3.3, in comparison to other countries. Productivity remains modest in Sudan, Egypt and Morocco

¹³Calculated as agricultural GDP/number of agricultural workers.

despite past investments in agriculture; they lag much behind Latin America and Caribbean and developed country averages. In contrast, Saudi Arabia agricultural value added per worker is relatively high compared with averages of the developing regions and has shown remarkable increase between the 1970s, to the 1980s and 1990s.

Figure 3.1 Capital Stock per agricultural worker



Source: FAO

Table 3.3 Agriculture value added per worker (constant 2000 US\$)

Country Name	1965-67	1975-77	1985-87	1995-97	2005
Egypt	835	964	899	1,681	2,128
Morocco	787	939	863	1,270	1,623
Saudi Arabia	1,400	2,046	1,723	10,141	16,651
Sudan	414	514	464	543	661
Near East Countries	638	1,660	1,149	4,549	7,004
East Asia and Pacific	186	203	266	347	459
South Asia	236	267	294	365	417
Sub-Saharan Africa			267	256	288
Latin America and Caribbean	1281	1,526	1,906	2,349	3,144
Euro Area		5,860	9,633	15,448	22,860
High-Income OECD		7909	12140	17343	28,574
World	453	657	714	779	939

Source: World Bank (World Development Indicators) and FAO (FAOSTAT)

Two conclusions emerge from these observations: overall investment in the agricultural sector has not increased noticeably for Egypt and Morocco, and for those countries where there has been improvement, it has come mostly through increases in natural capital stock rather than structural capital or machinery.

Second, there is a large scope to improve productivity of capital and labour assets in Egypt, Morocco and most noticeably in Sudan.

Finally, it should be noted that the extent of physical capital investment is only one aspect of growth in agriculture. Human capital, available technology, institutions, and other social and environmental factors all contribute to sustained growth and productivity improvements in agriculture.

3.2 Public Investments in Agriculture

In sharp contrast with the period between the 1970s and 1980s, public expenditures on agriculture for the region have been very low in the past ten years, particularly in relation to the contribution of agriculture to GDP. The share of agricultural GDP is about 12% on average for the Near East region, while the share of agriculture expenditure of total public expenditure does not exceed 5% on average (FAO, 2009a).

In response to the applied structural programmes and austerity measures since the early 1980s, governments of the region have been adopting measures to balance their budgets and reduce public expenditure. In many countries this has led to reduced investment in agriculture and rural areas.

External Assistance to Agriculture (EAA)

(EAA), which is a composite of Official Development Assistance (ODA) and non-concessional assistance remained low in the countries of the region and has declined significantly since the early 1990s. Overall, the ODA, which is directed mostly to low income countries in the region, decreased by 87% between 1990 and 2004. Most of this reduction came from the drop in bilateral donor assistance. It is worth noting that the development assistance to Iraq and Egypt has increased over the same time period (FAO, 2009a).

Intra-regional investments in agriculture

Endeavours in economic cooperation among Arab countries started with the establishment of the League of Arab States (LAS) in 1945. Numerous specialized agencies (organizations, authorities, funds) belonging or affiliated to the League of Arab States have been established to promote cooperation among the Arab countries in the field of agriculture and food security, with a particular focus on joint investments. Among these specialized authorities and funds are the Arab Authority for Agricultural Investment and Development (AAAID), the Arab Company for Livestock Development (ACOLID) and the Arab Organization for Agricultural Development (AOAD) as the agricultural research and development arm of LAS. The AAAID was established in the late 1960s with financial capital of US\$ 500 million to promote joint Arab investment in agriculture. Sudan was selected as the first country to target because of its untapped agricultural natural

resource base and as the potential breadbasket of the region. Later, the activities of the AAAID were extended to a number of other Arab countries. The ACOLID, on the other hand, was established in 1977 to develop livestock production and associated industries in the Arab World with financial capital of US\$ 214 million.

Assessed against their ambitious objectives, little success has been achieved by the joint Arab investments in agriculture. Sudan still remains far from being the bread basket for the region. Major factors behind the poor achievements include; i) instability of the political and economic situations in host countries; ii) unstable macroeconomic environment, particularly as related to exchange rate movement and foreign exchange policies; iii) poor infrastructural support and marketing services in host countries; and iv) prevalence of public organizations in joint investment initiatives, which made investments sensitive to the political relations which are affected by many internal and external conditions.

3.3 International Investments in Agriculture

International investments in agriculture in many countries have been low in the past with intra-regional FDI always representing a large portion of total FDI flows in the region. Total foreign investment flows for the period 1985-2000 show that FDI has been mostly concentrated in a small number of countries in the region and directed primarily to the hydrocarbon sector, followed by tourism, real estate, manufacturing, telecommunications and banking (Eid and Paua, 2006). Agriculture has received a very little portion of FDI up to 2006.

While overall FDI flows into agriculture have been low, the intra-regional share of total FDI has been rising at a steady rate from US\$8.8 billion during 1985-1995, to nearly US\$17 billion during 1995-2002 and to US\$77 billion during 2002-2007, with US\$14 billion in 2007 alone. In 2007, the share of agriculture in total intra-regional FDI reached a high level of 6% (AIECGC, 2007).

The share of intra-regional investment in total FDI in the region is expected to grow in the coming years. This is largely due to the financial crisis in Europe and the United States, which may make intra-regional investments a key category in investment portfolios of the countries in the region. In addition, investors will likely diversify away from the traditional sectors such as real estate and tourism into other sectors such as food, transport, and medical diagnostics (Oxford Analytica 2009). Recent estimates indicate that GCC investors have also increased their investment in the region, and they are now investing around 25% of their oil wealth in the region compared to 15% in 2003 (Oxford Analytica, 2009).

Paucity of up-to-date and detailed data precludes comprehensive examination of the structure and performance of FDI in agriculture the Near East . With the available sketchy data, it is only possible to give a general description of the situation.

A few observations on international investment flows in agriculture in the Near East, and particularly in Egypt, Sudan and Morocco are worth noting:

(i) *In most countries FDI in agriculture has been low, averaging less than 1% of total FDI, but has started to grow since 2006.*

While its share in total FDI is low, FDI in agriculture has continued to increase in the last decade, compared to the historical investment record in the region. In Sudan, agricultural FDI has grown at an average rate of 23% (from 2000 to 2008) although its share in total FDI remained low - around 1-2% until 2005 and up to 7.5% in 2006 (Nur, 2009). According to official Sudanese sources, FDI in agriculture has continued to increase in 2008-09, accounted for as much as 17% of all FDI in 2009 and is expected to grow to 50% of FDI in 2010 (Reuters, 2008). In Egypt, agricultural FDI has remained around 1% of total FDI but has been increasing since 2004, experiencing sharp growth around 2006 - 2007. Although FDI to agriculture has fallen in 2008 - 2009, it still remains high compared to 2004. In Morocco, FDI levels have fluctuated over the same period (Table 3.4).

Table 3.4 International investments in agriculture in Egypt, Morocco and Sudan 2000-2008 (in US\$ millions)

Year	Morocco	Egypt	Sudan
2000	1.7	576.8	10.0
2001	3.9	1,014.8	9.1
2002	2.2	683.3	43.1
2003	3.1	768.1	284.6
2004	5.4	1,256.5	5.1
2005	3.5	2,075.2	18.5
2006	2.6	5,302.4	216.9
2007	5.7	4,641.8	278.1
2008	n/a	3,680.5	77.8 ¹⁴

Source: Authors' calculations with data compiled from (Jaouad (2009), Salem (2009) and Nur (2009))

(ii) *Intra -regional FDI constitutes the bulk of FDI in agriculture in Near East countries*

Proximity, cultural and historical ties as well as the past efforts at promoting regional joint investments in agriculture are the major factors behind the dominance of intra-regional investment in the region. In Sudan, over the period 2000 - 2008, the largest share of FDI has been attributable to investments from Near East countries with Saudi Arabia being the most important investor (Table 3.5). Intra-regional investments are also important in Egypt. In Morocco however, investments from countries outside the region (particularly from Spain and France) represent more than 95% of all agricultural FDI, although the share of investments from countries in the region have increased in the past two-three years (Table 3.5).

¹⁴ 2008 numbers for Sudan are incomplete

Table 3.5 International investments by country of origin (% of total FDI)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Share of Near East Countries									
Egypt	93.1	86.6	78.0	83.8	67.4	58.6	52.6	83.0	85.2
Sudan ¹⁵	100.0	n/a	n/a	100.0	75.4	55.0	80.8	98.4	98.7
Morocco	n/a	0.7	12.4	1.7	7.4	5.0	8.3	16.8	n/a
Share of Other Countries									
Egypt	6.9	13.4	22.0	16.2	32.6	41.4	47.4	17.0	14.8
Sudan ¹⁵	0	n/a	n/a	0	24.7	45	19.2	1.6	1.3
Morocco	n/a	99.3	87.6	98.3	92.6	95	91.7	83.2	n/a

Source: Authors' calculations with data compiled from Jaouad (2009), Salem (2009) and Nur (2009).

Despite the multitude of investment cooperation and trade agreements adopted and implemented in the Near East region and the many provisions offered for the removal of barriers for trade and investments among these countries, the share of intra-regional agricultural trade in total agricultural trade in the region stagnated at the range of 8% to 15%. The region is becoming increasingly dependent on world market for its food supplies (see FAO 2000; and AOAD 2007). A striking feature of intra-regional agricultural trade is its concentration at the level of a few partners¹⁶. The commodity pattern of intra-regional agricultural trade is also characterised by its concentration in a narrow range of items. For the last 20 years, live animals, meat, fish and fish products were predominantly directed to regional markets, while vegetables, fruits and agricultural raw materials such as cotton reveal a clear extra-regional orientation. With increased investment and assured market outlet there is a wide scope for the expansion of production in many countries in the region and will offer a room for increased intra-regional trade in food and agriculture.

(iii) Within countries, most international investments in agriculture are concentrated in particular sub-regions and sectors, and are relatively more capital and resource intensive.

The scale, resource demands, geographical location and sectoral allocation of investments vary from country to country.

As previously mentioned, Sudan has traditionally attracted resource-seeking investments with its natural resource wealth, particularly from Near East countries. With 2.5 million square kilometres, it is the largest country in Africa, and one of

¹⁵ Figures for Sudan include joint investments with Sudanese partners.

¹⁶ Algeria, for instance, is Tunisia's most important partner within the region for both exports and imports. Oman, on the other hand, imported the bulk of its regional agricultural products from two neighbouring countries, Saudi Arabia and the UAE. Such concentration can be explained by proximity and geographical considerations.

the few countries in the region that still has untapped land and water potential. Neighbouring nine African countries and providing sea access for a number of them, it is strategically located. It also has a fairly young population, representative of the rapid population growth in the last 30 years. But the resource wealth of Sudan is overshadowed by widespread food insecurity and poverty (22% of the Sudanese were undernourished in 2005–2007; FAO, 2010).

In recent years, resource-seeking investments in Sudan have increased dramatically. A sample of land deals are presented in Table 3.6. The demand for investment is rising rapidly with new agreements and scoping missions happening daily, which makes it very difficult to have up-to-date data on these investments. Moreover, most agreements are negotiated among the parties involved without much information being made public.

Table 3.6 Allocations of agricultural land for 2000–08 hectares (commitments above 1,000 hectares)¹⁷

Investors	Total investment (hectares)	Joint venture involvement (hectares)
Foreign investors	713,000	
Saudi Arabia	365,190	48,300
United Arab Emirates	71,820	32,340
South Korea	84,000	500,000
Egypt	5,500	126,000
Others	186,500	
Local	2,363,000	
Total investment	3,782,000	

Source: Author's estimates based on communications with the Ministry of Investment, Sudan

Almost all FDI in Sudan in the past has been concentrated in the three most developed regions (states) of the country, namely Khartoum, the River Nile and Gezira (86% of investment projects were located in these three regions) and mostly in primary agriculture (Nur, 2009). Evidence shows that impacts of such investments have been mixed, but overall they have created less job opportunities than other forms of investments (Nur, 2009). While investments should naturally go to activities/locations where returns are greatest, policies should address social and environmental aspects, and find ways to incorporate these aspects in cost-benefit assessment of investments. In countries with high rates of food insecurity this is important, and ultimately of concern to investors, in terms of the sustainability/stability of their investments and future growth opportunities. Morocco has also shown relatively high regional concentration of

¹⁷ It is estimated that not more than 10% of the land deals (with foreign investors) are implemented. It was also reported that processes have been initiated to cancel about 10 to 15% of the deals with foreign investors.

FDI in agriculture where the Northern Atlantic front attracts most of the investment, particularly in the fruit and vegetables sector mostly because of proximity to ports and markets (Jaouad, 2009).

One important characteristic of agriculture FDI in Sudan is the prominence of capital intensive agriculture investment. Capital intensity is particularly high for investments from countries in the region to Sudan. Analysis of capital intensity of Arab FDI in Sudan shows that though 37 percent of the total FDI projects and 41% of total FDI capital are in mixed farming (cereal/cash crops/feed/livestock), only 25% of total FDI jobs are created by this sub sector because of high capital intensive production techniques (Nur, 2009).

In contrast, FDI in agriculture in Egypt tends to be more labour intensive, such as investments in food or yarn/textile industries. New land reclamation and cultivation has become the most important category of FDI in the last two-three years, accounting for almost 84% of all agricultural FDI. The second most import sector attracting FDI is food processing. Intra-regional investment represents over 40% of all FDI in the primary production sector, and 52% of all FDI in the poultry industry. Intra-regional investments also represent a large portion of livestock/poultry and fertilizer sector investments in Egypt (Table 3.7).

Table 3.7 Relative importance of FDI by sector, Egypt (Yearly Average for the Period 2000 - 2008)

Investment Activities	All Investment (billions \$US)	(%) FDI	(%) Intra-regional FDI	(%) Intra-regional FDI	Sectoral share in total FDI (%)
Land Reclamation & Cult.	1618.6	52.63	41.34	11.29	38.34
Livestock, Poultry and Fish	298.8	43.67	41.46	2.21	5.87
Food Industries	1789.5	34.97	21.55	13.42	28.16
Yarn & Textile	1235.4	24.27	9.40	14.87	13.49
Fertilizers	799.5	32.26	32.26	0.00	11.60
Pesticides	22.8	5.26	0.88	4.38	0.05
Integrated agro-Industry	122.0	3.44	0.98	2.46	0.19
Agriculture (Others)	17.8	3.37	0.56	2.81	0.03
Slaughter Houses	73.5	66.94	66.94	0.00	2.21
Grand Total	5978.2	37.17	26.82	10.35	100

Source: General Authority for Investment, Egypt.

The overview of the little information available on FDI in Egypt, Morocco and Sudan clearly demonstrate the rising recent trends of intra-regional investment in agriculture particularly in Sudan, which is mostly linked to land acquisitions. With the bulk of the recent investment in land being directed to Sudan, the question remains: which basic food commodities can profitably be produced in Sudan,

particularly in the long run? To meet their food needs, the priority of the intra-regional investors is to invest in the production of basic food, particularly wheat. Given the existing climatic conditions, the capacity for a significant expansion in wheat production and productivity in Sudan at the magnitude that can meet intra-regional investors' aspirations remains to be investigated. Furthermore, Sudan has huge arable lands, but it is not clear if available water would be sufficient to cope with future needs of expansion in the magnitude of the recent land leases to foreign investors, without even considering the secondary impacts of these investments on the rural populations and the crowding in urban areas. Finally, the types of investments (large and capital intensive projects) may not be properly suited to the country's needs. These concerns are equally relevant for investors, as they affect the sustainability/viability of investments in the long run.

Many investments, not included in agricultural FDI figures above may also have direct or indirect linkages to agricultural sectors of the countries. Infrastructure improvements, institutional investments such as finance and insurance institutions, and other investments in improving knowledge or tapping on existing knowledge are all important components of progress in agriculture and food systems.

3.4 Policies and Programs Related to FDI

The institutional and policy framework is crucial in determining the allocation of investments and their linkages to national food security concerns. Given the urgent need for investment in agriculture, most countries have focused primarily on improving the institutional and policy environment for attracting investments. Less attention has been given to maximizing the positive impacts and domestic linkages of these investments in terms of improved food security.

Differences in motivation of investors as well as the existing economic and political climate of the countries shape the policies aimed at promoting investment. Among the countries studied, investor motivations are different depending on the country. For example in Sudan, most recent foreign investments in agriculture are resource-seeking, as opposed to investments in Egypt and Morocco which are largely market-seeking.

The sudden influx of investment in agriculture has prompted the establishment of new policies. Especially for resource-seeking investments, such as the new land acquisitions, a variety of policies such as leasing rates, and other policies governing land use come into play. It is important to differentiate between overall policies to attract investment and those that specifically address the resource-seeking investments.

Policies aimed at attracting overall investments into agriculture

Attracting FDI is hard for many countries. Most of the needy countries in the region are classified as high credit risk and lack adequate legal and regulatory

frameworks to support FDI. The shortage of private domestic and foreign investment has affected these countries the most, with insufficient market size, poor infrastructure, political uncertainty, corruption and restrictive policy regimes. Efforts to attract investment include changes in existing policies and some government initiatives directed toward improving the investment climate.

In Sudan, the government has had an open policy toward investors in the past. In the first half of 2008, the government launched the Agricultural Revival Program, a four-year program aimed at facilitating agricultural production by improving infrastructure in agricultural regions and attracting foreign investors, particularly those from the Near East. According to the Sudanese Ministry of Investment, agriculture has been declared as priority sector for investments and several steps have been taken to promote the investment climate.

In Sudan, there are no restrictions on foreign investors, who are free to take 100% of their profits outside the country and there are no incoming labour restrictions. However, the institutional and regulation environment of agriculture investments is not well developed given the limited experience with FDI to agriculture. Nonetheless, agriculture investments are growing rapidly, with 60% of the investments taking place in the last 10 years.

In addition to the numerous incentives introduced by the Government over the last few years to attract foreign investors, there are cogent factors that improve the overall investment environment. Despite the ongoing conflict in Darfur and the complications of the South North Peace Agreement, the economy is becoming more stable with relatively low inflation and no significant shifts in the exchange rate over the last few years. The major challenge facing investors in agriculture in Sudan is poor infrastructural facilities. Inadequate transport, storage, power supplies, and other marketing facilities remain major obstacles for investment in agriculture in Sudan.

Policies toward FDI in Morocco have been favourable to investors. The new agricultural strategy (called Morocco Green Plan) launched by King Mohammed VI of Morocco in 2009 is considered as a road map for private investors. Its success depends however on how effective and convincing the marketing and communication campaign around its incentives and projects will be. Proposed policies are aimed to eliminate obstacles related to land access, bank loans and irrigation water use (Jaouad, 2009).

Egypt has also been implementing similar set of policies to attract FDI. Exemption from profit taxes in the initial period of investments and easier financing sources were seen to be particularly more attractive to foreign investors.

Policies and regulations governing land acquisitions

Policies relating to land acquisitions differ significantly between Egypt, Morocco and Sudan. In Sudan land is leased at an annual lease rate ranging from \$2.7 up

to \$35 per hectare with the lower rates being more common. The arrangements for leases depend on the individual cases. Several safeguards have been established by the Sudanese government to ensure that the use of land takes into account necessary social and economic concerns of local communities. For example, the leases are first established for three years and then extended every seven years up to 99 years. There are also some key requirements from investors, requiring them to establish feeder roads, provide electricity and assign 10-20% of the land invested for local community use (to be negotiated with the locals)¹⁸.

In Morocco land purchase by foreigners is prohibited, which may have played a role in shaping FDI which is geared toward processing and services rather than production activities. However, foreigners can lease, and as a result of the leasing state-farms strategy (agricultural land previously under the management of a public institution "Société de Développement Agricole (SODEA), through the tender procedure, there have been new sources of foreign direct investment and skilled management to the sector. In 2004, 41,837 ha of agricultural leases were issued, generating 4.7 billion MAD (\$610 million) in revenue for the state. According to government statistics, foreign holders of these leases injected 25.3 million MAD (\$3.28 million) into the sector in 2006. A similar tender involving an additional 38,731 ha of state farmland was concluded in early December. While the final awarding of the leases will not be announced until early 2008, it has been acknowledged that a large number of bids were made by agricultural businesses from France, Egypt, Spain and the United Arab Emirates

In Egypt there does not seem to be ban on land purchase by foreigners, but recent experience has shown cases with allocations of land to foreign investors in areas where significant land reclamation would be required to bring land into use.

Most of the policies in the host countries studied are aimed at improving the investment climate or to attract investors. In order to ensure sustainability and longer term viability of investments, direct and indirect impacts need to be carefully analyzed to develop policies that enhance the indirect impacts such as income generation, domestic linkages, transfer of know-how and other spillover effects. Most large-scale investments to agriculture are capital intensive and use advanced technologies. Impacts on small scale production, use of technology or creation of other income generating opportunities should be priority for the countries.

¹⁸Personal communication, Sudan Ministry of Investment.

4. International Investments and Food Security Concerns: Issues and Policy Implications

As mentioned above, the Near East region is unique in that both rich and poor countries in the region have food security concerns. Assessing the contribution of foreign direct investments to food security in investor and host countries is not an easy endeavour. Not only is it difficult to predict the future development of any investment, it is also a daunting task to address concerns of the various stakeholders, including, inter alia, private sector of both investor and host country and the governments. Added to this, are the different food security concerns and the differences among the countries in terms of resources and incomes. In order to safeguard the concerns of the various parties, it may be useful to develop a framework to highlight the particular aspects of investments, which need to be evaluated so that the negative impacts can be minimized and achievable gains are maximized in a sustainable manner. An important point is also to consider past investments of the same nature (if any) and identify lessons learned.

While the new surge in international investments in agriculture is a welcome development, the type of the investment, (such as its demand on resources, type of production, the degree of capital intensity or dependence on technology, location, effect on employment, etc.) will set the stage for its eventual impacts. As each investment is different, the potential costs and benefits need to be well defined and set against the various goals of the stakeholders not only in the host countries but in the investing countries as well. Identifying appropriate policies and mechanisms to attain win-win outcomes need a careful evaluation of each investment as a starting point to begin a better targeted approach to agricultural investments to enhance their food security contributions.

The overview presented in the paper shows that the policies related to FDI are weak, and often do not have a well-defined framework to effectively address food security concerns. While not all FDI can be expected to have direct impacts on food security, they are bound to change existing food systems or introduce new ones. The type of investments, in terms of scale and factor intensity will also affect the potential contribution to food security, as shown in Nur (2009) where capital intensive and regionally concentrated investments in Sudan have not been successful in promoting broad based development. In order to address these points host countries will need to give more attention to evaluating foreign investments to agriculture from a wider perspective. Given the economic, demographic and ecological characteristics of the region, along with varying degrees of productivity in agriculture, some policy approaches which could help in developing favorable investment opportunities could include:

- Proper valuation of investment projects that take into account resource use, social and economic impacts that go beyond evaluating just economic costs and benefits.
- A better understanding of the types of investments needed to deliver win-

win outcomes for all involved, in terms of scale, type of activity and impact on food security. Investments which will develop food systems that are sustainable in the long run with less dependency on food imports should be promoted actively. Making these types of investments profitable for the investors should take a priority in the policies to provide a favourable investment climate.

- Establishment of a well functioning regulatory framework to improve not only the investment climate and business operations but to safeguard local people. This means establishing protection for local food systems, including livestock and property rights.
- Developing policies to facilitate community oriented efforts by foreign businesses, creating mutually beneficial opportunities, through improvements in labour laws, encouraging institutions to train labour force in needed fields, provision of incentives for social investment, other support mechanisms and improved transparency
- Improving infrastructure (for production, transport, storage, communication, etc.) which could be partially implemented through BOT practices¹⁹
- Exploring alternative investment modalities that are particularly geared toward improved food security. These may include contract farming or include local private sector, as well as community investments which may enhance the quality and sustainability of investments.

A regional focus on food security may be needed to better formulate and harmonize policies and tap into opportunities, given the diverse national and household food security concerns and resource availabilities. The potential capacity for staple food production has its limits, but income generating opportunities are ample and a mix of investments geared at food processing, food service, and other sectors linked to agriculture could also provide alternative income opportunities for rural people, as well as increased employment opportunities in urban areas. Within this context, regional initiatives could be very promising in promoting food security in the longer term.

5. Conclusions

The objective of the paper was to provide an overview of past and current international investments in agriculture, in the context of the unique characteristics of the region and the diverse concerns for food security, in order to highlight some policy issues related to FDI in agriculture.

The key points regarding FDI in agriculture in the Near East countries can be summarized as follows:

¹⁹BOT: where private investors are allowed to build infrastructural entities such as roads and transportation and communication systems operate them for their benefit for given numbers of years and then transferring them to the public sector.

- FDI in agriculture represents an insignificant portion of total FDI but it has surged recently
- Intra-regional investment dominates FDI in agriculture in countries of the region
- The nature of FDI in agriculture has been mostly resource-seeking in Sudan and market led in Egypt and Morocco; recent trends reflect the same characteristics
- FDI to agriculture in the past, particularly in the case of Sudan, has met with little success regarding alleviation of food insecurity
- There has been a change in the composition of foreign investment in Near East agriculture, where private investments are growing faster than others (public)
- FDI in the past has been concentrated in particular regions and activities

Several important challenges to economic development and food security were highlighted throughout the paper. Most important are water scarcity, high rate of population growth and the increasing dependency on food imports. The success of future FDI in terms of sustainability of investment in agriculture and their contribution to development will be constrained to a large extent by these challenges. Future investments will need to address these challenges, in order to be more resilient, through the promotion of food systems which will not exacerbate the resource and economic problems of each of the countries.

Policies then will have to incorporate the challenges and aim towards encouraging investments that are conducive to growth and improved food security. During the past few years, many of the Near East countries in need of foreign investment have improved the environment for investment quite significantly. Policies vary among countries; land acquisition is allowed in Sudan but prohibited in countries such as Morocco.

The recent global food crisis and the increased attention given to agriculture by Governments in the region, has resulted in a better understanding regarding the mutual benefits of joint private ventures to both investors and host countries. There have been several examples of such joint ventures in the past and the experience of Kenana Sugar Company in Sudan stands out as an example of a public-private partnership ²⁰.

Conditions prevailing in the Near East countries look more encouraging for economic cooperation and investment than those that were prevailing during most of the second half of the 20th century. Increased intra-regional cooperation,

²⁰Kenana Sugar Company was established in Sudan through joint public-private funding by Arab countries in the 70s. This initiative has greatly increased the productive capacity in the country and expanded sugar production, making Sudan self-sufficient in sugar and even an exporter of sugar. However, other social and economic impacts in the region have been mixed.

through increased trade and investment, continues to be an issue of great interest in the Near East. The promotion of intra-regional agricultural trade and intra-regional investment in agriculture are seen as vehicles for enhancing the region-wide food security²¹. The two approaches of trade and investment in agriculture are complementary, but the question remains as to the extent to which these two approaches could achieve improvement in regional food security.

Future work should focus on evaluating selected investments, not only in terms of their impacts but also their viability. The lack of knowledge in a rapidly changing investment environment, creates obvious policy challenges for developing country governments. Developing an information base should be a first priority so that concrete policy recommendations and courses of action for mutual benefits can be identified.

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²¹Regional food security here is often referred to in terms of availability of adequate food supplies at the national and regional levels.

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Country Case Studies

Egypt

by

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Views expressed in this paper are solely those of the author and do not reflect the views of the Food and Agriculture Organization of the United Nations

This paper has been revised and condensed from its original form

1. The Agricultural Sector in Egypt: Overview of Progress and Limitations

The eighties of the past century witnessed the beginning of economic reforms and structural adjustment in the agricultural sector in Egypt. Although the sector had not been given top priority in development concerns and investment expenditures, it has nonetheless realized and accomplished important development achievements as reflected by many indicators. However, the sector is still facing plenty of problems and obstacles today that limit the full realization of its potential development and modernization.

1.1 Main Features of the Evolution of the Agricultural Sector

Since the 1980's, the agricultural sector has achieved an annual rate of growth ranging between 2 to 3.3%, affected by many factors, most importantly, the limitation of investment expenditures. The ongoing economic development plan, (2006 / 2007 - 2011/2012/) aims at raising the annual agricultural growth rate to about 3.9%.

During the last twenty five years, Egyptian agriculture has witnessed considerable positive progress that has included; implementing various economic reforms, such as in trade liberalization and prices ; and technological development and improving productive relations, particularly, those prevailing between the owners and the renters of the agricultural lands. These major factors of progress are reflected in several achievements, which could be summarized as follows for the period 1980 - 2007:

- The rates of self-sufficiency have increased in major food crops, in spite of the population increase. On top of this comes the increase in the self-sufficiency rate of wheat, from 39% in 1980 to around 58% in 2007.
- The agricultural land area increased by about 2.4 million feddans¹ , from about 6 to 8.4, and the crop area from about 11.1 to nearly 15.4 million feddans.
- The production rate of various products exceeded those of the population growth, which led to a significant increase in the average per capita share of such products.
- The productivity per feddan of all crops increased with rates having ranging between 20% - 27% for clover and cotton; between 47% - 56% for the cases of sugar-cane, potatoes and peanuts; and between 64% - 86% for rice, wheat, sugar-beets and grapes. Whereas, the increase rate reached about 94% for maize, about 102% for bananas, and 114% for tomatoes. Also, dairy and milk productivity increased per head of cow to around 92% in the year 2007 when compared with 1980.

- The value of agricultural exports increased from about 200 million dollars to nearly one billion dollars.
- The number of people employed in agriculture increased from about 4.1 to 5.5 million people.

1.2 Main Problems and Limiting Factors

In spite of the positive developments of the past, the accomplishments so far are still short of what is possible, especially if the problems and obstacles facing agricultural development could be relaxed. These problems and obstacles are represented particularly in the limitation of the value of investments allocated to the agricultural sector, which is considered below the sufficient levels that would fulfill the investment requirements in order to enhance the agricultural sector and to allow its dormant development capacities to grow. Investments are needed to tackle the strategic objectives of realizing food security, to address the needs of the population who depend mainly on this sector, and finally to improve the sector's contribution to GDP.

It should be noted that private investments allocated to agriculture and irrigation in the national developmental plans have increased over time but the actual level of investments have lagged behind. As seen in Table 1.1, agricultural investments in the period 1970 -2002 reached about 9% of the total national investments. The fifth five year plan (2002/2003 – 2006/2007) aimed at raising the share of investments allocated to agriculture, but actual investment levels did not exceed 8%. This ratio has dropped significantly within the current on-going development plan, (2006/2007- 2011/2012) to about 4.8% of total investments.

Table 1.1 Share of agriculture and irrigation sector of total investment in socio-economic plans and the private sector proportion

Five Year Plans	Total Investment (L.E billions)	Share of Agric. & Irrig. Sector		Private Sector Investment Share in Agric. & Irrig. Sector (%)
		Value	%	
1971 / 72 - 1975 / 76	4.33	4.33	7.9	4.0
1976 / 77 – 1981 / 82	18.04	18.04	9.2	29.4
1982 / 83 – 1986 / 87	39.54	39.54	8.7	23.3
1987 / 88 – 1991 / 92	46.50	46.50	10.6	53.7
2002 / 03 – 2006 / 07*	503.40	503.40	8.0	63.0
2007 / 08 – 2011 / 12	1295.00	1295.00	4.8	78.6**

* Data not Available for the Years 1992 / 93 – 2001 / 02.

** Included Holding Companies and Business Sector.

Source : 1- **The role of State in Agriculture Sector Within the Economic Reform era, Institute of National Planning, December 1994.**

2- **National Economic Plan for year 2007 / 08 – 2011 / 12 .**

¹ Feddan = 4200 m² = 0.42 ha

Besides the poor and limited investments in the field of agricultural development, the most pressing obstacles to development are related to resources, technological aspects, and the organizational and institutional framework. One of the most important problems is that of limited water resources, and its increasing scarcity; exacerbated by the prevalence of the traditional irrigation systems, which are inefficient in using water. Another problem in resource use is due to the issue of fragmented ownership alongside the weak small farmers unions. The inadequate investment in agricultural development has greatly hindered the potential ability of executing the required projects and programs meant to overcome such problems, or at least easing its pressure and severity.

The limited investment in agricultural technological development has had negative impacts on the poor, and hindered the role of research and technology transfer institutions. It has also had a clear impact on reducing the rates of implementing the horizontal expansion programs that were planned for, especially during the past ten years.

1.3 Current and Emerging Issues

Egyptian agriculture faces problems and challenges imposed by the changing local and global environment. The increasingly distorted relationship between the population and the agricultural resources especially water resources is considered one of the most important emerging issues.. This is exacerbated by the troubles Egypt is facing — along with other countries in the world — related to the negative impacts of the world crises, namely; food, financial, and economic. The challenge to cope with the technological developments, particularly in the age of biotechnology and information technology is another emerging issue. All these problems and obstacles amount to being the top priority issues. These issues constituted the main targets for the sustainable agricultural development strategy in Egypt up till the year 2030, which could be summarized in the following way:

- Improving the living standard of the rural population and reducing the rate of rural poverty.
- The sustainable use of the natural agricultural resources and maximizing productivity for both land and water units.
- Attaining higher levels of food security for the main food commodities.
- Supporting the compatibility of the agricultural products in both national and international markets
- Improving the agricultural investment climate.

2. Foreign Direct Investments (FDI) in Agriculture

2.1 Economic Reforms and Highlights of FDI Inflows over Time

The economic reforms adopted and applied by Egypt, has had a noticeable impact in attracting and encouraging more FDI flows to the country, which reached about half a billion \$US at the beginning of this century (2000/2001/), representing around 0.6% of the total GDP. FDI inflows have increased over time, reaching nearly \$US 13.2 billion in 2007/2008/, to represent about 8.1% of the total GDP (Table 2.1).

Table 2.1 Net FDI flows (\$US billions)

YEARS	2000/ 01	2001/ 02	2002/ 03	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08
Value	0.5	0.4	0.7	2.1	3.9	6.1	11.4	13.2

Source : Central Bank of Egypt .

Despite the increase in FDI inflows over time, the share of FDI to Egypt is still very limited, compared to world level. It is estimated that the direct investment flow of \$US 1538 billion, reached in 2007, constituted only 0.85% of global FDI.

Within the framework of the economic reforms, reliance on private investment in the last decade reached about 67.2% of the total investment budget in the national development plan in 2007/2008. Thus, international private investments became an essential and important constituent of private investments, represented by a percentage which reached nearly 40% in 2006/2007 and 36% in 2007/2008. It is fair to say that economic development in Egypt has become increasingly dependent on foreign investments, which in the past few years have constituted more than one-fourth of the value of the total development investment in Egypt.

As the value of FDI flows have increased, the distribution of sectors where investments are destined have also changed significantly. For example, the oil sector used to represent the biggest portion of FDI flows with a share of almost 65.1% in 2004/2005, which has fallen to around 31% in 2007/2008. On the other hand, FDI flows recently have been destined to establishing and expanding companies in different sectors (23.7% in 2001/2005 to around 48.5% in 2007/2008). Also, the share of such investment, represented in the revenues of privatization programmes (or enterprises sold to foreigners), has increased to about 20.5% in 2007/2008 after being estimated at hardly 11.2% in 2004/2005 (Table 2.2).

Table 2.2 Directions of net FDI flows (\$US billions)

	2004 / 05		2005 / 06		2006 / 07		2007 / 08	
	Value	%	Value	%	Value	%	Value	%
Petroleum Sector	2540.3	65.1	1832.2	29.9	3014.8	27.3	4100.0	31.1
Establishing new companies	925.5	23.7	3347.8	54.8	5200.0	47.0	6400.0	48.5
Selling Companies and Assets to non-resident ants	419.5	10.8	905.7	14.8	2800.0	25.3	2300.0	17.4
Investment in Real-estates	16.5	0.4	25.7	0.4	39.0	0.4	400.0	3.0
Total F.I. net Flow	3901.8	100	6111.4	100	11053.2	100	13200.0	100

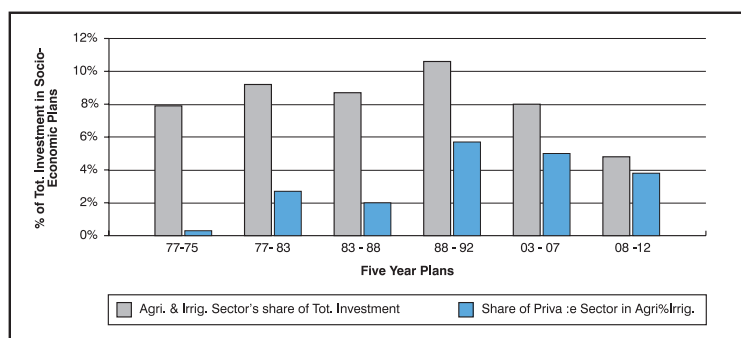
Source : General Authority for Investment, Egypt .

Evolution and Current Situation of FDI

The rate of agricultural development performance in Egypt is closely connected to the overall values of investment to this vital sector. In this regard, two important phenomena can be observed:

1. The inadequate share allocated for the agricultural and irrigation sectors of total national investments, which ranged from around 1%, since the beginning of the seventies up until the past few years. This doesn't reflect the importance of the agricultural sector in leading and/or directing the comprehensive economic development in Egypt in general, nor in improving the living conditions of the rural population in particular.
2. The fall in the share of agriculture and irrigation in total investment in the last economic development plan (2007/2012/2011-2008/), declining to nearly 4.8% of total investments, which is less than half what it used to be throughout the past half-century. (Figure 2.1).

Figure 2.1 Share of agriculture and irrigation sector of total investment in socio-economic plans and the private sector proportion



The Role of Foreign Investments in Agricultural Development

The main obstacle facing agricultural development and future potential for investment is the limited allocation of investment to the agricultural sector, creating an investment gap between the actual and needed investment. Foreign investments play an important role in narrowing this gap and hence, achieving challenging objectives related to developing and increasing the food and agricultural production. Foreign investments also help in developing and supporting the processing and services projects related and integrated with agricultural production.

The value of the direct foreign investment in food industries and processing agricultural products and inputs has increased greatly since 2000, reaching 3.68 billion dollars in 2008. It is to be noted that these investments realized their maximum value in 2006, when it reached 5.3 billion dollars; representing nearly 60% of the total private investments, both local and foreign, in the above mentioned sectors/activities in the same year. In this connection, it should also be noted that intra-regional investments constitute the most important component of foreign investments, contributing nearly 27% of all investments against roughly 10% for the investments from extra-regional sources (Table 2.3).

Table 2.3 Investment in agriculture sector and related industrial sub-sectors by origin 2000 - 08 (Millions USD) (Internal Investment Companies, Free Zones and Low 159)

Years	Total investment		Egyptians		Foreigners (intra-regional)		Foreigners extra-regional)		Total FDI. (%)
	Value	%	Value	%	Value	%	Value	%	
2000	2120.0	100	1543.2	72.8	537.1	25.3	39.7	1.9	27.2
2001	2650.3	100	1635.5	61.7	878.8	33.2	136.0	5.1	38.3
2002	2591.1	100	1907.8	73.6	532.9	20.6	150.4	5.8	26.4
2003	3170.3	100	2402.2	75.8	643.8	20.3	124.3	3.9	24.2
2004	6193.4	100	4936.9	79.7	846.4	13.7	410.1	6.6	20.3
2005	6039.4	100	3964.2	65.7	1215.5	20.1	859.7	14.2	34.3
2006	8781.8	100	3479.4	39.7	2787.1	31.7	2515.3	28.6	60.3
2007	10235.9	100	5594.1	54.7	3854.7	37.6	787.1	7.7	45.3
2008	12021.2	100	8340.7	69.4	3135.9	26.1	544.6	4.5	30.6
Total	53803.4	100	33804.0	62.8	14432.2	26.8	5567.2	10.3	37.1
Yearly Average	5978.1	100	3756.0	62.4	1603.6	26.8	618.6	10.3	37.1

Source : General Authority for Investment, Egypt

2.2 The Destination of FDI in Agricultural Projects Including Related or Integrated Projects

Foreign investments in agriculture are distributed over a large number of different areas. An overview of investments in the various sectors is explained below.

Land Reclamation and Agricultural Production

This includes reclamation and cultivation projects, in addition to the other agricultural production projects including plant, animal, poultry and fish. It is worth mentioning that reclamation and cultivation projects obtain the biggest share of the foreign investments, about 38.3%. Regarding agricultural production of poultry, livestock and fish, their share of the foreign investments reaches about 5.9%. The most important category in investments in production activities is poultry, at 3.4% of all FDI. While the share for the rest of the projects belonging to this group, which includes, animal feed production, fish and other mixed animal production projects, is about 2.5% (Table 2.4).

The data for the period 2000-2008 indicates that foreign investment constituted more than half the total investments, both local and foreign, in the field of reclamation and cultivation (about 52.6%). Around 52.3 % was for poultry projects, around 29.2% for feed (animal diet) projects, and 26.9% for fish projects. Foreign investments in these projects depend mainly on intra-regional investments, whereas extra-regional foreign investment contribution is decreasing in this regard.

Food Industries

The share of these investments is about 28.2% of the foreign investments in the agricultural and related sectors. It is to be noted that the processing of various agricultural crops represents most of the food industries' projects that enjoy the attention and concern of the foreign investments. Its share of the previous ratio reached about 8.9%, followed by the pre-prepared food processing projects about 4.96%, then dairy products projects with around 4.49%, and desserts industry, macaroni or other dry crackers with almost 2.9%. Beverages and mineral water processing industries were at 2.3%, while less important projects like oil and grease (ghee) industries with about 1.9%, and cereal grinding or rice husking (whitening) about 1.1%. In some food industry projects, the relative importance of foreign investments exceed half the total investments available, both local and foreign, as is the case in the dairy products projects with about 53.3%, the pre-prepared food projects with about 51.1%, and beverages and mineral, or natural water processing projects, about 50.1%. Whereas, this ratio ranges between 20% to 37% in meat and fish processing projects, sweet (desserts), pasta and frozen or stored foods. On the other hand, it was noticed that the intra-regional investments make up more than 50% in some projects like dairy products, processing agricultural crops, oils and grease (fats), processing meat and fish, and pre-prepared foods.

Table 2.4 Relative importance of F.D.I. in different investment areas (Billion USD) (Yearly Average for the Period 2000 - 2008)

Investment activities	All investment	(%) FDI	(%) Intra-regional	(%) Extra-regional	(%) Sectoral share in total FDI
Land Reclamation & Cult.	1618.6	52.63	41.34	11.29	38.34
Livestock, Poultry and Fish	298.8	43.67	41.46	2.21	5.87
Fodders	60.0	29.17	24.50	4.67	0.79
Poultry	142.7	52.26	52.14	0.12	3.37
Fish	10.4	26.88	25.00	1.88	0.13
Mixed Animal Products	85.7	41.07	37.57	3.50	1.58
Food Industries	1789.5	34.97	21.55	13.42	28.16
Dairy Products	187.2	53.31	31.94	21.37	4.49
Milling	137.4	17.47	5.53	11.94	1.08
Agric. Crop Products	612.6	32.40	26.72	5.68	8.93
Sweet, Macaroni	216.0	29.44	8.98	20.46	2.86
Other Foods	120.0	1.58	1.17	0.41	0.08
Fats, Oil and Margarine	112.3	37.49	37.22	0.27	1.89
Cold Storage	40.1	25.93	24.69	1.24	0.47
Beverages and Natural w.	99.1	50.55	5.85	44.70	2.25
Meat and Fish	42.4	22.88	16.75	6.13	0.44
Pre-Prepared Foods	216.0	51.06	31.85	19.21	4.96
Flavors	6.4	10.94	6.25	4.69	0.03
Yarn & Textile	1235.4	24.27	9.40	14.87	13.49
Fertilizers	799.5	32.26	32.26	0.00	11.60
Pesticides	22.8	5.26	0.88	4.38	0.05
Integrated agro-Industry	122.0	3.44	0.98	2.46	0.19
Agriculture (Others)	17.8	3.37	0.56	2.81	0.03
Slaughter Houses	73.5	66.94	66.94	0.00	2.21
Grand Total	5978.2	37.17	26.82	10.35	100

Source : General Authority for Investment, Egypt .

Fertilizer and Pesticide Industry

During the period (2000 - 2008), foreign investment contributed about 260 million dollars to the fertilizer and pesticide industries. This translated to 11.5% of the value of total foreign investments in the agricultural related fields. The fertilizer industry is considered important from the foreign investor's point of view, especially relative to the pesticide industry. It is noteworthy that the constitution ratio of the foreign investments in the total local foreign investments value increases in the case of fertilizers, up to about 32.3%; whereas it greatly decreases in the pesticides industry projects, down to nearly 5.3%. The foreign

investments in fertilizer projects almost depend completely on intra-regional investments, contrary to that of the pesticide industry.

Yarn and Textile Industry

This field includes many related and vertically integrated activities, all depending on main basic inputs of cotton, flax (lint), wool, and silk produced by the silk worms. Many important projects depend and grow on these products, such as ginning, spinning, weaving, the printing and clothes industry, plus other cotton and wool industries. The share of all these fields together reaches nearly 13.5% of the total foreign investments flow devoted towards all agricultural related fields during the period, 2000 - 2008.

In the projects of this industry, the ratio of the foreign investments to total investments, both local and foreign, reaches about 24.3%. It is worth noting that extra-regional investments are the most significant in these projects in general, as its ratio amounts to about 61.3% of the total foreign investments value.

3. Case Studies on Foreign Direct Investment in Agricultural Projects

Egyptian agriculture has numerous projects financed partially or totally by foreign investments. Many of these projects have realized considerable success to the extent that some of them have been considered as pioneering and leading projects in their fields of specialization due to their huge size on one hand, and the highly developed means of technology they adapt on the other.

This part of the report summarizes the findings from the field meeting conducted with the senior officials from some of the companies, in order to understand their point of view and actual personal experiences about the following most important aspects.

- Information on the major products and projects approved by the Egyptian market for foreign investments in the agriculture sector and related activities.
- The major limitations or constraints that negatively affect the agricultural investment atmosphere in general and the current rates of the foreign investments in particular.
- The extent of government cooperation needed/desired to address the problems and obstacles that exist.

It is worth mentioning that, it was possible to obtain clear answers to the above mentioned points through the meetings held with four of the big companies each in its field of specialty. The design of the study and some important results are summarized below.

The four studied companies work mainly in the field of poultry production and in the complementary activities associated with this sector, such as production of poultry feed as well as one-day old chicks. Other sectors include production of cooling equipment needed for poultry farms, and the agricultural green-houses used in the production of vegetables, flowers and ornamental plants.

The selected companies are considered among the leading firms in the Egyptian poultry market as together, they not only account for more than 20% of the total volume of the Egyptian market, but are also considered pioneers in their fields of work. For instance, one of the selected companies is considered the sole producer in the Egyptian market for the cooling equipment needed for poultry chambers and agricultural green-houses, which used to be imported from abroad until recently. This is in addition to the fact that some of the senior officials of said companies are actively participating in and contributing to the committees and the meetings held by the ministries concerned with various agricultural aspects and activities.

3.1 The Advantages, Limitations and Constraints of the Egyptian Market for Foreign Investments

The interviews indicate that the existing investment legislation provide an appropriate level of investment incentives for the agricultural activities covered in the study. Investment legislation that was particularly beneficial can be listed as follows:

- Exemption from profit taxes for ten years from the beginning of starting production operations.
- Facilitating tax procedures and reducing tax-rates on profits, especially after subjecting the projects to taxation upon the termination of the exemption period.
- Providing the suitable man-power or labour-force necessary for the smooth running and operation of the projects in the Egyptian work-market, and at appropriate wage rates; particularly for the trained and skilled technical labour-force, which usually constitutes a definite constraint for such projects in some other countries of the region.
- The expanded size of the Egyptian market due to the great population density, in spite of the increased market competition rates (compatibility). Yet, the said competition came in favour of the companies enjoying the bigger investment share and the better management systems, some of which are covered by the study.
- The availability of financing sources in the Egyptian finance market (banking system), which helps in securing a proper ratio of the investment requirements for the projects. Some of these sources are represented in many of the programmes and projects funded by the foreign aids, particularly those financed by European Union.

Among the companies interviewed, three of them were able to achieve annual profit rates, ranging between 12%-28%, as average annual rates on the invested capital throughout the duration of their work span. One of these companies was able to accomplish profit rates that exceeded 60% in four years of its work span, from 1982 till now.

Regardless of the advantages provided by the Egyptian market to foreign investments, there are also many limitations and constraints that still exist, which directly or indirectly limit the flow of foreign investments. The most important of these constraints can be summarized as follows:

- The obvious weakness and minimal work experience of the Unions organizing the performance of the private sector companies such as producers' Unions.
- Unions that are currently limited to the poultry producers and the horticulture crops exports. This is in addition to complexity of the lengthy establishing procedures of such unions and the necessity to establish each of them in regard to a special or given legislation provided by the concerned ministry to the parliament, the People's Assembly, for approval. This is a matter that prolongs the time span necessary for the establishment on the one side, and complicates the procedures on the other.
- The relative weakness of the markets and quality control measures, especially those regarding the commodities displayed in the markets, which negatively affect the quality of such commodities and subjects a great part of it to the commercial cheating. This particular factor directly affects the quality of marketed agricultural production inputs, especially fertilizers, pesticides, medicines and veterinary vaccinations.
- The prices of the agricultural products have sharply fluctuated, due to the changes in international prices and poor organization of supplying commodities in the markets relative to the demand. The weak supply of commodities is due to the weak producers' organizations on one hand, and the lack or absence of a legal system (laws, rules or regulations) governing the contractual agriculture on the other.

3.2 Cooperation with Concerned Authorities in the Respective Ministries

It is to be noted that significant and positive development has occurred in the nature of government and private sector investors during the past decade. This is due to the creation of the institutional organizations which organize this relationship, namely; the commodity councils which were formed within the Ministry of Industry and Trade, and through which all commercial polices and obstacles affecting the performance of the productive companies in all sectors, including agriculture, are being discussed and negotiated. Representatives from companies participate in these councils regularly, actively and effectively.

These councils have succeeded, during the past five years, to motivate and convince the government to endorse and implement an effective system which supports the producers by easing and removing many of their problems and burdens. For example, the international costs of shipping and transportation imposed on exportation, the burdens of enhancing and upgrading the quality of the commodities and the commitment with the provisions and the international conditions. This has been done through applying specific and given programmes and/or projects which aim at quantifying the companies to obtain the quality certificates of excellence, which enable them to strongly compete with similar companies in both regional and international markets. It is worth mentioning here that, among the examples of positive development of the cooperative relations between productive companies and the country's authorities, is that the private sector, especially the representatives of the foreign investment companies, have actively participated and contributed to the phrasing and issuing of the sustainable development strategy for the Egyptian agriculture till the year 2030. They have also had a positive role in determining the mechanisms of its implementation.

4. International Investments in Agriculture and Their Impacts

4.1 Evolution of Foreign Direct Investments

It was clarified earlier that foreign investments in general and in the fields of the agricultural projects both related and integrated ones, in particular, have witnessed a great increase during the last few years. However, this increase was not at the same level or degree in all fields. It was noticed that foreign investments are concentrated during some years in some particular fields. The most obvious observations noticed in this regard, and according to the indicators pointed out from tables ; (6), (7), (8) , are the following:

- At the beginning of the period 2000 - 2008, FDI activities were concentrated on milk production and dairy processing projects. In the year 2000, the value of FDI in dairy products projects amounted to almost 381 million dollars, representing two-thirds of the total FDI in agricultural and related fields.
- In the next year (2001), the largest share of FDI was directed to projects of processing agricultural products, with a ratio amounting to about 72% of the total FDI in the agricultural and related fields, for a value of nearly 735 million dollars. However, in the following years, this value and the relative importance of such projects decreased.
- In 2002, the relative importance of land reclamation and cultivation projects increased to the extent that almost 278 million dollars were directed to it, representing around 41% of the total FDI flow to the agricultural and related fields. Yet the largest amount of FDI towards these projects was in 2007 and 2008. The ratio of these projects in the total FDI in the agricultural and

related fields reached about 68% in 2007, then increased up to 84% in 2008, when the value of FDI in these projects reached around three billion dollars.

- In 2003, FDI flows were mostly directed to the spinning, weaving and fertilizers projects. The spinning and weaving projects alone received about 304 million dollars, representing about 40% of the total FDI in the agricultural and related fields. The FDI flows continued to these projects during the following years, with some fluctuations, as it increased in some years and decreased in others. However, it showed no significant retraction. As for the fertilizer production projects, FDI reached about 280 million dollars in 2003, representing 36% of the total FDI in agricultural and related fields. However, the following years witnessed sharp changes in the FDI for such projects. For instance, after realizing a great increase in 2006, reaching 3.2 billion dollars and representing about 61% of the total investments in the agricultural and related fields, more than half the previous value was withdrawn (about 1.6 billion dollars) in 2008.
- 2004 showed continuation of the relative importance of FDI flows towards spinning and weaving, and fertilizers projects, as their ratio together reached about 53% of the total FDI in the agricultural and related fields.
- In 2005, the most attractive projects for FDIs were the pre-prepared food processing, processing agricultural products, and land reclamation and cultivation projects with a ratio amounting to 39%, 18% and 17% respectively.
- 2006 witnessed the biggest investment concentration in fertilizers production projects, as referred to earlier, along with the relative flourishing in FDI flows directed to land reclamation projects. These projects, however, remained the most attractive field for FDIs during 2007 & 2008, as they obtained about 68% and 84% of the total FDI value in the agricultural and related fields respectively.

Figures (7) to (19) , shows the trends of FDI in different sub-sectors and activities during the years 2000-2008.

4.2 Main Factors Affecting the Foreign Investments Fields Directions

The previous review for the developments of FDI in the agricultural and related fields, and the field case study on models (types) of the projects which foreign investment in Egypt contributes to, allows the possibility to make certain observations about the factors affecting the direction and fields of the foreign investments. They are as follows:

- The economic reform in Egypt, particularly in the field of improving and

enhancing the investment climate, has had an obvious impact and a positive effect on the increased FDI flow directed towards many agricultural and integrated projects, as previously clarified and explained.

- Some investment fields were lucky enough to receive the biggest portion of the FDI during the period 2000-2008 in general. However, there were many joint factors that helped attract foreign investments to these fields, along with the positive indications and the results of the feasibility studies, particularly concerning the higher profits of these projects and the opportunities for marketing its products to both local and export markets. Some of the important investment fields like poultry production didn't receive big shares of the FDI during the period 2000-2008, as they had received greater investments in previous years and production reached the marketing capacity in the available local markets.
- Some projects, like those in the fertilizer industry, received great attention from FDIs during the last few years. However, the investment flows towards them have retreated and decreased. They have converted into negative flows, due to the objections they faced from the civil community for expected negative impacts on the environment. Some important projects like dairy production processing have a better chance for expansion in light of the available marketing capacities. However the marketing system for liquid milk is considered an important limiting factor, hindering the availability of the production inputs with the specifications, proper conditions or suitable provisions and sufficient quantities for such projects. Yet, the success achieved by some previous projects in this field is partially due to the integration between these projects and commercial dairy cattle breeding projects which guarantees the availability of the suitable amounts of the main raw material (liquid milk).
- In some fields the leading or the pioneering projects were able to gain or win high competitive capacities and capabilities, which had a negative impact on the possibility for new players to enter the field of these projects. An example of this can be found in the food processing projects as well as the beverages industry. It was possible to find, among the compatibility capacity of the big leading companies, the integration among the rings of this activity chain (e.g. production, processing, marketing and exportation) besides the huge expenditure on the promotion and advertising fields to introduce the trade name and mark to the various markets and to acquaint them with it. Hence it become well known, which led to the relative increase in the obstacles for entrance into these fields by the newcomers or players in the market.
- The food and financial crises during the last few years, had its negative impacts on FDI flows to different projects and fields. It is also to be noted that the sharp increase in agricultural commodities prices at the end of

2007 and the beginning of 2008, followed by the financial and economic crises, led to stopping the increased FDI flows to the agricultural and related fields that occurred in 2006, and made it retreat sharply for the following two years.

- In the frame of the decreased and retreated FDI for agriculture during the last two years (2007- 2008), it was noticed that FDI, except for intra-regional FDI, was the most affected by the crises. While the retreat of the extra-regional investments from the agricultural and related fields decreased from 2.5 billion dollars in 2006, down to about 787 million dollars in 2007, then further down to 545 million dollars in 2008, the value of the intra-regional investments increased from about 2.8 billion dollars in 2006, to about 3.9 in 2007, although it retreated a little the following year to around 3.1 billion dollars.

5. Policy Issues

5.1 Institutional and Regulatory Framework for International Investments

Among Egypt's economic policy priorities, is the provision of a suitable climate to attract both local and foreign investments. In spite of the strategic importance for development in agriculture and related sectors, especially within the scope of the threats that still exist in the context of world food crises, as well as the potential climate change risks, the investments in these fields do not enjoy any special preference or advantages but are subject to all rules and regulations applied to other fields.

The special policy axes to attract and encourage FDI to Egyptian agriculture involve many aspects, including, inter alia, exemptions, guarantees, improvements, and development of various investment services. These services include the development of legislation governing investment, as well as facilitating and simplifying the procedures to the investors. This of course, is in addition to the structural development activities of the General Authority for Investment and Free Zones, as it is considered the main authority concerned with foreign investments issues for the investors.

Improvements may include a one window system, which may include special departments concerned with investors' affairs, to settle all problems and disputes they face in one place. Also, it may include the provision of data and information with modern electronic systems along with developing the systems and promotion channels for investment using numerous marketing channels.

In spite of what has been carried out in the frame of the policies motivating and encouraging foreign investment in Egypt, and what has already been achieved and accomplished since 2000 in terms of development from such investments;

this matter has not reached the end of the road yet, and there are many sides that still require more development and improvement. The concerns for investment climate and attraction factors for the foreign investments in general and the agricultural projects and relevant integrated fields in particular.

In regard to the investment climate in general, there are some problems and obstacles disclosed or revealed by the businessmen and investors. These require more work to overcome and mitigate their negative impacts on business and the investment sector in Egypt. Specifically the rules, systems and policies that deal with the relevant authorities as well as the availability of skilled, trained manpower, etc., are the ten main obstacles facing investment in Egypt from the perspective of a sample of investors and businessmen from the World Bank Report on compatibility in the African countries for the year 2007.

In regard to the investment climate for agricultural development projects, increasing food and agriculture production and the connected and integrated projects, it is of paramount importance to not leave such vital and strategic fields in the competitive arena of foreign investments where they face other sectors that enjoy high and fast revenues, such as many of the tourist, commercial and services projects. This matter requires that the policies for attracting and encouraging foreign investments should include special advantages and preferences for the investing in the agricultural and related fields. Specifically, for projects with strategic importance for food security, improving the development situation of farmers and alleviating poverty prevailing in the agricultural and rural areas. This would make these regions more attractive to the flow of the investments, both local and foreign equally.

5.2 Agricultural Investment Framework in Agricultural Development Strategy up to 2030

The Ministry of Agriculture and Land Reclamation has recently prepared a strategy for sustainable agricultural development till 2030, in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and the International Fund For Agricultural Development (IFAD). This strategy was approved by the specialized authorities and thus, started the preparation for the first executive plan emerging from it. It is worth mentioning that the strategy includes proposals for a number of new agricultural policies which may positively impact the agricultural investment in Egypt, and will attract more investment flows to this sector, domestic or international. The proposed policies include the following important features.

A New Policy for the Horizontal Expansion of Agriculture and the Agricultural Settlement

The strategy included a new policy for the horizontal agriculture expansion and the agricultural settlement which aims at:

- Ensuring that the circumstances for the investment projects are financially and economically feasible, in order to ensure a suitable return for the investors. It would also support the country's productive and exporting capabilities.
- The reclamation maps for the new areas would include and guarantee all development elements required for the agricultural, marketing and social aspects, along with the regions that should be determined and identified for the agricultural industries.
- Preparation of financial and technical profiles for the investment opportunities in agricultural and related projects, or complementing them by attracting farmers, growers, and businessmen to invest in such projects.
- Developing credit lines to be devoted for land reclamation and investment activities in the new lands.

New Policy for Contracting in Agriculture

This policy would aim to achieve the following:

- Coordination between production and marketing sectors, as well as supporting the compatibility of the agricultural products in both local and foreign markets.
- Founding the proper environment and formal interrelations among all parties to ensure more stability and profitability for producers, exporters and businessmen.
- Limiting and minimizing the marketing loss, along with increasing the ratio of the processed portion from the agricultural products.

The elements of this policy also included founding or establishing a new non-bias and fair judging authority to ensure the rights of all contract parties; establishing a new system for contracts registration and for the insurance of the marketing contracts; and using them as acceptable guarantees for borrowing from the banking system.

Developing a Policy for Supporting the Regional Cooperation in the Various Agricultural Sectors

This policy aims at strengthening regional agricultural cooperation and coordination, especially in the fields of utilization of agricultural resources, as well as supporting the joint agricultural investment opportunities, particularly within the Near East/African regions. The proposed policy also involves establishing joint specific councils for agricultural cooperation with a group of countries that enjoy potentialities for proper and suitable investment opportunities for agricultural and food security projects. They would perform the following tasks:

- Proposing and supporting new fields for the joint cooperation and

investment.

- Proposing recommendations for the concerned executive authorities in order to strengthen, support and activate the coordination policies. Also, laying down the practical solutions for investment cooperation, obstacles and problems.

Developing and Improving the Agricultural Investment Climate

The proposed policy includes achieving the following objectives:

- Limiting and minimizing the contradiction in the laws and legislation that have a direct impact on investment.
- Coordination among authorities and administrates concerned with agricultural investment, whether they belong to the ministry of agriculture or other ministries.
- Facilitating the implementation or executive procedures for investment in agriculture projects and those which are related to or integrated with it.

The proposed policy also referred to the necessity for reviewing all executive legislations, procedures and regulations related to agricultural investment in various fields, particularly the following:

- The procedures of land specialization and/or allocation for specific purposes in the horizontal agricultural expansion areas.
- The procedures of agricultural land-owning (properties).
- Identifying the land areas devoted to establishing the projects related to and integrated with the agricultural activities.
- Unifying the authorities dealing with the investors in one authority and one step (the one investment window system), through which all governmental authorities and associations related to agricultural investment should work or operate.
- Clarifying the investment opportunities within the scope of an integrated and a comprehensive data-base for the investment information that should be renewed and updated regularly.

Policies for Agricultural Insurance

This policy aims at:

- Increasing the agricultural producer's capability to bear the burdens and face the risks of the negative production or marketing factors, as well as natural disasters.
- Improving the prevailing investment environment for many agricultural activities.
- Providing a better and more appropriate atmosphere for applying contracting agriculture systems. The proposed policy also includes a

number of elements and components, the most important of which are:

- i) Applying the optional principal in joining the system.
- ii) Identifying one governmental authority capable of arbitration and settling the disputes.
- iii) Imposing insurance companies to start gradually applying such a system.



Morocco

by

Mohamed Jaouad

Views expressed in this paper are solely those of the author and do not reflect the views of the Food and Agriculture Organization of the United Nations

This paper has been revised and condensed from its original form

List of Acronyms

ORMVA	Office Regional de Mise en Valeur Agricole
EACCE	Etablissement Autonome de Coordination et de Contrôle des Exportations
IAV-HII	Institut Agronomique et Vétérinaires Hassan II
MAD	Moroccan Dirhams (\$1 = 8.5 MAD)
MIPO	Mediterranean Investment Project Observatory
GOM	Government of Morocco
IMF	International Monetary Fund
FI	Foreign Investment
FDI	Foreign Direct Investment
EU	European Union

Executive Summary

- The objective of this investigation is to study the characteristics of Foreign Investment (FI), including private foreign direct investment (FDI) and other funds in agriculture, and to analyze their role and impact on agricultural production in Morocco.
- Given the limited availability of data and information on foreign investment in agriculture, the study will focus on analyzing empirical data provided by surveys from the main Moroccan agricultural zones. The present investigation addresses foreign investment issues in agriculture at the national level as information is available.
- When the results of the survey allow, we go into more detailed analysis regarding agricultural commodity groups and specific commodities where foreign investment exists and is important, including types of investment, their origin and other issues.
- Existing foreign capital in Moroccan agriculture as compared to other sectors is too weak (less than 1% of total FDI received by Moroccan economy). This low level could be explained in a broad sense by a communication deficit regarding real opportunities of Moroccan agriculture and by lack of appropriate policies targeting foreign investors. In addition, agriculture is penalized by getting a less and less share of public investment (this share went from more than 20% two decade ago to less than 10% today).
- Foreign investors in Moroccan agriculture are mostly attracted by high value added fruits and vegetables because of the comparative advantages in main regions (North, South-Agadir) with appropriate climatic conditions and the northern Atlantic front with sufficient water and closer to Europe (Morocco's principal market).
- FDI in agriculture is export-driven investment in the sense that investors produce commodities either to be sold as raw products (tomatoes, oranges, clementines, asparagus...) or as raw inputs for processing industries elsewhere.
- Foreign investment in agriculture in the past has had a real positive impact on technology transfer, know-how, crop yields and on productivity in general rather than a source of reducing or financing the balance of payments deficits. Foreign capital has also contributed to:
 - Crescent integration of Moroccan agricultural economy into the world market;
 - Better allocation of resources in using agricultural production potential;
 - Leading domestic farmers and processors towards new ways of

producing and managing their business in the context of globalization.

- The new agricultural strategy (Called Morocco Green Plan) launched by the King of Morocco in 2009 is considered as a road map for private investors. Its success depends however, on the effectiveness of its marketing and communication campaign around its incentives and projects.
- With reference to public authorities' announcements, the the Government of Morocco (GOM) is committed to eliminating obstacles related to land access, bank loans and irrigation water use. Comprehensive and proactive public policies are put together to attract foreign capital into agriculture and to facilitate private investment operations. The challenge in this case is to come up with appropriate policy instruments to implement these policies and get them down to the field level.

1. Introduction

As a follow-up to the structural adjustment program which started in 1983, imposed by the World Bank and the IMF, and to take into account the social bias of this program, the GOM put together a proactive package of structural reforms aiming at fostering growth and creating jobs. The main objectives of these reforms are to:

- Promote the private sector;
- Increase productivity;
- Facilitate Morocco's integration into the world market; and
- Combat poverty in rural areas and in fragile suburbs.

There is broad consensus amongst Moroccan economic and political actors that integration into the world market necessitates appropriate trade policies to promote exports and voluntarist investment policies to attract more and valuable foreign investment.

Indeed, Morocco has made a genuine effort to improve business climate and modernize the legal and regulatory investment framework. This process has mainly included:

- Revising investment codes by unifying and harmonizing 9 sectoral investment codes into one investment chart. The agricultural investment code adopted in 1969 is not included. This chart concerns nationals and foreigners as well;
- Modernizing and updating labor law to facilitate dialogue and collective negotiations between employees and employers;
- Improving regulations of the banking sector and reform of the administrative system:
 - New regulations have been imposed on credit institutions. For instance, the new banking law brings the Moroccan legislation in line with that of developed countries.
 - In the insurance sector, new rules for generating agreements and strengthening control procedures have served to increase investor trust.
 - Regulation of the Casablanca Stock Exchange conforms to international standards.

Macroeconomic stability and a sustained pace regarding economic reforms have contributed to a surge of foreign investment inflows into Morocco since late 1990s. This achievement is to be found in the increasing openness of Moroccan economy and in its raising economic integration vis-à-vis the EU market and to other markets in the coming years (USA, Near East).

As for agriculture in as early as 1969, special attention has been paid to improving production, as well as assuring self-sufficiency and food security. Given the

strategic status of agriculture, the State has heavily intervened in the process of producing, processing and selling food commodities. Most investment operations were carried out by public institutions. However, to be in line with its commitment to market and price liberalization, the GOM started making some concessions by promoting private investment and by opening up agricultural economy to the rest of the world.

The purpose of this paper is to describe and analyze foreign involvement in Moroccan agriculture investment flows. In this regard, we start by presenting a broad picture of the agricultural sector, focusing on its weaknesses and strengths. We then examine in more detail investment trends and patterns and their implications on agriculture. Another section is dedicated to policy issues, especially policy and policy instruments used to develop and foster foreign investment.

2. Methodology and Data/Information

To meet the main purpose of the present study, i.e., characterizing foreign investment in agriculture and assessing its implications, we first spent plenty of time on looking into available data and information, and on studying published reports and studies that deal with investment in agriculture or in agro food sector in general. The outcome was to some extent deceiving and insufficient in the sense that so far there hasn't been any profound and detailed analysis of foreign investment issues in agriculture at the national level. This deficit is to be found in the lack of detailed data and information sources, and also because foreign investment in agriculture is a new phenomenon and it will be time yet before mastering information system concerning this type of investment.

However, to clear this hurdle, we used for our diagnosis and analysis two types of information:

- General information and data on foreign investment in agriculture as a component of national investment. The main information sources are the Ministry of Finance, Haut Commissariat au Plan (HCP) and the Exchange Office (Office des Changes); and
- Data and results of a survey carried out by graduate students in main agricultural regions that attracted most of the foreign investments.

For the purpose of the present investigation, we define the agro-food sector or agro-value-chain as the range of activities associated with the processing of agricultural products into food products, as well as all other activities which provide edible goods. In fact, the range covers the upstream (farm production), the processing section and the downstream (distribution) domains of the sector.

3. An Overview of Agricultural Value Chain in Morocco

3.1 A Short Description of Agriculture: Current and Emerging Issues

Agriculture remains a key sector in the Moroccan economy and accounts for over forty percent of the labour force and around sixteen percent of GDP. Despite this small share, agriculture accounts for much of the variance in annual GDP growth because of wide swings in agriculture production depending on the presence or absence of drought.

Agriculture is critical for nearly 2 million households that depend heavily on it. More than half rely on rain fed crop production. It provides income to about 82% of the people living in rural areas.

On the basis of the Ministry of Agriculture's information and data (Ministry of Agriculture, 2008), one could schematically present Moroccan agriculture as having three components:

- 31 agricultural spaces covering the whole national territory,
- 10 upstream value chains (cereals, livestock, sugar beet and cane, olives, vegetables, citrus,...) and 10 downstream value chains (processed cereals, processed fruits and vegetables, sugar, oilseeds, processed olive, ...)
- 5 actor categories corresponding to three main farm sizes: (1) very small farms accounting for more than 41% of total farms and using about 8% of total agricultural acreage; (2) small to medium size farms with 57% and 70%, respectively, and (3) large farms with 2% and 22%, respectively (Ministry of Agriculture, 2004)

Morocco's climate is essentially arid or semi-arid, with moderate winters and dry summers. The agricultural acreage is 8.8 million hectares (ha); 7.4 million ha (80%) are rain fed and 1.4 million ha (14%) are irrigated. Annual rainfall is estimated at some 150 billion cubic meters (m³) overall. However, two constraints must be noted: rainfall variation in time and space. Morocco has always had drought years, but their frequency and severity have greatly increased since the early 1980s. Of the last 16 years, nine droughts have been recorded, whereas during the first half of the century there was on average only one drought every ten years. Spatial distribution of rainfall in Morocco is characterized by declining gradients from north to south and from west to east. Certain regions receive 600 to 700 millimeters (mm) per year, while others receive less than 100 mm.

Climate and land contour determine both the state of vegetation and the natural resources management policy pursued by the government. The total area of the country, 71 million hectares, is divided into usable agricultural land (13 percent), forest and alpha zone (12.5 percent), roadway terrain (30 percent), and uncultivated land (44.5 percent). As a result of management practices, 80 percent of the 150 billion m³ of precipitation is lost each year through evaporation or discharge into the sea.

Only 14 percent (21 billion m³) of the total rainfall could be mobilized in a feasible technical and economic way. Currently about 12 billion m³ are used, of which 75 percent is surface water and 25 percent is underground water. The total water use is divided into Agriculture (86 percent), Industry: (5.5 percent) and Potable Water (8.5 percent). The limited supply (or even water scarcity) in agriculture is a matter of essentially intrinsic availability, despite the fact that there is about one billion m³ available but not used because of an irrigation infrastructure deficit for 110,000 ha.

The average farm size is 5 ha. Roughly 70% of farms, especially those operating in rain fed areas have less than 2 ha. These farm types appear to be totally subsistence-oriented and produce little for the market. They often are net consumers of food. Only 11,000 farms currently operate on lands in excess of 50 ha. They are private and commercial farms; they produce for both domestic market and exports (Ministry of Agriculture, 2004).

As far as land tenure in Moroccan agriculture is concerned, land ownership is divided into two systems:

- Traditional System based on Muslim laws and local traditions;
- Modern System also called “books regime”, registration and wide publicity, inspired from Robert Torrens “The Real Property Act”.

Land ownership in Morocco is also characterized by a diversity of statutes which do not ensure ownership stability and the necessary guarantees to do long term investment. It is divided into different types of ownership (Ministry of Agriculture, 2008):

- **“Melk” (own property):** Constitutes the majority of lands (75% of agricultural acreage, 6.5 million ha), it belongs to individuals as well as group/family members. Division among family members remains a major problem in this type (50% of Melk land). Only 20% of this acreage is securitized, i.e., it has ownership title; the remaining 80 could not aspire to have access to credit. Moreover, renting transactions are less practiced because of inadequate tenancy legal framework.
- **“Domain”:** It represents about 7% of agricultural acreage (500,000 ha) and includes State-owned lands, forests, beaches, etc. More than 50% is managed by State-owned companies (SODEA and SOGETA) and the rest is distributed for exploitation to farmers under the Agrarian Reform Program. This category of land is under reforms in the form of: (1) long term renting package for investment purposes in the case of SODEA and SOGETA land (80,000 ha for 17- 40 years) and (2) land concession to farmers in the case of agrarian reform program.
- **“Collectives” (or collective property):** represents about 15% of agricultural acreage (1.3 million ha). This type belongs to “ethnic” groups and communities (rangelands, forests etc.). This is managed and controlled

by the Ministry of Interior. Selling and buying transactions are impossible in this case. Renting is possible but very limited.

- **“Guich” (or army)**: 3% of agricultural acreage (200,000 ha). They provide no rights for ownerships, only used for exploiting. No selling or buying transactions.
- **“Habous”** : represents about 1% of agricultural acreage (100,000 ha) and belong to Muslim entities like mosques, families and public institutions like the Ministry of Islamic Affairs.

Major productions include cereals, especially soft wheat, citrus, other tree crops like dates, figs, almonds, and oil crops, especially olives and olive oil. Most farms raise livestock, in both traditional and modern ways. From the mid-1960s Moroccan production was increasingly oriented to “modern” crops intended for export or urban consumption such as soft wheat, citrus, sunflowers and other oilseeds, sugar cane and sugar beets, and cotton. Since 1985, production has begun to move back more towards traditional products like olives, citrus and vegetables (e.g. tomatoes).

Agricultural products account for some 30% of total exports, and about 20% of total imports (in value terms). Traditionally Morocco was an exporter of agricultural products to Europe, especially off-season fruit, principally citrus, and vegetables such as tomatoes. Over the last twenty years the accession of Greece, Spain and Portugal to the European Union has meant increased competition in the key European market. In recent years Morocco has begun to diversify exports into new products like strawberries and into niche markets like argane-oil products, a traditional seed which produces oil highly valued for nutritional uses and beauty products. Agricultural exports consist mainly of fruit and vegetables, notably citrus, tomatoes, potatoes, cucumbers, apricots, peaches, fruit juice, canned vegetables and olive oil. Export revenue generated by this group of agricultural commodities averaged about US \$1.5 billion; 55% of which are represented by fresh products and the remaining 45% goes to processed goods.

For imports, they are highly concentrated on basic food items. More than half of total imports (in real terms) consist of wheat, sugar and vegetable oil. Food imports rose faster than total agricultural imports during the last fifteen years (160 % versus 80 % over the 1990-2005 period).

Food security issues were at the core of public policies since the 1960s. The first policies targeted self-sufficiency in main staple goods such as wheat, sugar, edible oil, milk and meat. For example, total grain consumption more than doubled between 1960 and 1985. Population increase alone is adding 150,000 tons to the total domestic demand for cereal each year (about 3% of annual production). Increasing income results in a further increase for food, particularly for those products for which elasticity of demand is high (meat, milk, eggs, sugar and vegetables).

As for the potential, the last decade has known a good agricultural production performance of the main products. Annual growth rates during this period were: 30% for cereals, 7% for horticultural products, 6% for dairy products and 8 % for meat. This progress is the result of mainly yield improvement. Consequently, the self-sufficiency ratios (domestic production versus domestic demand) were on the average, for the same period: cereals (58%), sugar (50%), red meat (98%), milk (86%), fruits and vegetables (surplus for exports). However, it is worthwhile qualifying this in the sense that yield increasing is essentially facilitated by good crop years in terms of sufficient rain, which means that this production boom may not be sustainable since the inputs use ratios (certified seeds, fertilizers and mechanization) are among the lowest in the region, i.e., 10%, 34% and 0.35 horse power/hectare respectively instead of 30%, 60% and 0.5% as international standards.

By late 1980s, Moroccan public policies emphasized food security issues instead of self sufficiency ones and put them among economic and social development priorities. The self-sufficiency perception showed its limits, because the state, the economic performance and status were unable to incur the costs of implementing this policy for a long time. Important efforts have been made to increase food supply and availability within the domestic market and to improve the population real income or purchasing power.

Over the past two decades, Moroccan agriculture has experienced relatively low and erratic growth rates (less than 5% on the average) despite its multiple valuable roles (economic, social, cultural, and environmental) and the importance of the related sensitive issues for the whole society. The resulting dynamics are insufficient to lever the agricultural sector to meet the current challenges in terms of creating more jobs and reducing poverty. One of the important components of the whole agro-food sector is agro-processing. This agro-food link has a considerable potential and is experiencing a real dynamism. Alone it represents one third of the country's industrial production and one fifth of its exports. Morocco could be considered as one of the good examples in the Near East region and even in the Mediterranean zone with the gradual building of a real agro-food sector. The progressive nature of regulations, the dynamism of domestic market, and the improvement in the technical and industrial environment explains this progress.

There remain handicaps. Those affecting directly the upstream of the value chain concerning the fresh or gross products such as drought, low level productivity; and those directly related to the agro-processing sector like: unbalanced quality of the tools of industrial production, non- standardized products, weakness in the logistics chain and the packaging industry, atomization of the offer, shortage of financing means and isolation of certain agricultural areas linked to the mediocrity of the infrastructure.

Since independence (1955), agriculture in Morocco has faced numerous challenges, mainly:

- Weak private investment capacities and insufficient involvement of the

- banking system;
- Stakeholders diversity translated into great social and economic disparities;
 - Scarcity and availability of water. Climatic and soil conditions vary dramatically across the country's regions. While some regions receive rain fairly regularly, access to water is the major factor affecting production and productivity. Regular and adequate supplies of water have been the primary technical challenges facing Moroccan agriculture;
 - Land tenure and the distribution of agricultural "ownership" have contributed to poor performance. The vast majority of agricultural holdings are small. Around half of cultivated land is not officially registered in land records, so that the majority of small producers do not hold title to their land and do not have collateral, making it almost impossible for them to access credit;
 - Structural and perpetual constraints regarding agricultural land issues, irrigation water scarcity and institutional and supporting capacities;
 - In addition to these issues, agriculture's performance is compounded by social factors and a lack of physical and market infrastructure.

As a result of these obstacles, Moroccan agriculture could be characterized as a system at two speeds. On the one hand, there has been a small modern, intensive, irrigated agriculture based on relatively large holdings and producing largely for exports. On the other hand, there has been the majority of agriculture, illiterate self-sufficient peasants on small holdings producing a mix of crops: cereals, olives, market vegetables, and raising a few cows, sheep or goats.

However, contrary to these counterproductive forces Moroccan agriculture has high prospects in the sense that it gets innate strengths, principally:

- Relatively competitive labour force, compared to other competitors;
- Close to its main markets, especially the European market, coupled with an improved logistic;
- Proved comparative advantages in fresh and processed fruits and vegetables.

The agricultural policy has varied to some extent over the last few decades, but to a great extent its goals and objectives have been remarkably consistent. Its ultimate objectives have been to increase the country's earnings from agricultural exports, to achieve food security (or formerly self-sufficiency), to improve the incomes and quality of life of farmers, to encourage good environmental practices, and to prevent a massive rural exodus to cities and abroad to avoid social instability and insecurity.

3.2 Market Integration

The agri-food system in Morocco is articulated around nine value-chains: cereals, sugar, olives and oilseeds, horticultural products, citrus, milk, red meat and white meat. The degree of market integration of each chain depends on the structure

of the corresponding market and on social and economic importance of the product. The following table gives some characteristics of these chains:

Table 3.1 Characteristics of agro food value chains

Value chain	Production use or destination			Price liberalization		Origin of investment
	Domestic market	Export	Self consumption	Totally	Partially	
Cereals	75%	0%	25%		*****	N
Milk	85%	0%	15%	*****		N+F
Red meat	85%	0%	15%	*****		N
White meat	95%	0%	5%	*****		N
Olives	80%	15%	5%	*****		N+F
Oilseeds	100%	0%	0%	*****		N+F
Citrus	55%	45%	0%	*****		N+F
Horticulture	85%	13%	2%	*****		N+F
Sugar	100%	0%	0%		*****	N+F

Source: Ministry of Agriculture, 2008 - 2009; Akesbi N., 2008 and the author's estimations.

Note: N = National capital/investment, F = Foreign capital/investment

The existing value chains could be categorized into three groups

Group of Necessary Products or Staple Goods: Cereals (Bread); Sugar and Oilseeds (Edible oil).

Some of the main characteristics of these value chains are given by the following table:

Table 3.2 Characteristics of staple goods

Value chain	Share in agricultural acreage ¹	Share in gross income in agriculture ²	Share in employment ³
Cereals	75%	38%	70%
Sugar & oilseeds	2%	2%	5%

Source: Ministry of Agriculture, 2008 and The Author's estimations.

1 Total acreage 8.8 million hectares in 2008

2 Total agricultural income \$10 billion in 2008

3 Total employment in agriculture 4 million jobs in 2008

The corresponding value chains are under state intervention and/or regulation either by setting and controlling prices (reference price for soft wheat and fixed price for bread) or by regulating prices and market competition (Sugar and oilseeds).

The value chain of cereals is exclusively too complex. It is first characterized by a

great number of producers with different scales (more than one million farmers), about 1,300 collecting traders, 100 authorized traders, 13 cooperatives, one union of cooperatives, about 150 milling industries, more than 9,000 traditional milling units. Then it breaks down to a multiple trading spaces, collecting centers, grain halls and numerous weekly traditional markets (Souks).

This market structure associated with persisting state intervention especially in setting the price for bread, has so far not fostered private investment nor attracted foreign capital. All cereal businesses are owned by national residents.

On the contrary, sugar and oilseed value chains went through significant economic reforms and prices are today totally free of state intervention (except for control of price overshooting). The state sold all state-owned sugar factories to COSUMAR which is a subsidiary of one of the powerful holdings in Morocco, i.e., Omnium Nord Africa (ONA). This holding has another subsidiary (Lesieur Cristal) that owns more than 60% of oilseed's market share.

As for foreign capital, foreign investors do not own any operating business in these branches, but hold some shares within ONA's equity. Published data in this regard give a holding shares ratio of about 10%. Since the ONA group's operations embrace many business domains such as food processing, tourism, telecommunications, mining, finance and distribution, foreign investors anticipate income from all these activities. There is no data on food processing proportions.

Group of Domestic Market-Driven Products: Milk; Red Meat and White Meat

The characteristics of these livestock-based products are determined by that of livestock in Morocco. In fact, livestock is considered as a principal social vector and a source of employment in rural areas and of wealth transfer between cities and suburbs and rural communities.

As the table below shows, three main value chains make up the Moroccan livestock sector on the basis of generated gross income and employment.

Table 3.3 Characteristics of livestock products

Value chain		Share in gross income ¹	Share in employment ²
Poultry		16%	3%
Ovine and Goats		30%	65%
Bovine	Red Meat	15%	18%
	Milk	37%	13%

Source: Ministry of agriculture, 2008 and the Author's estimations

1 Total livestock income \$4 billion

2 Total livestock employment 2.5 million jobs

In addition to their complicated market structure, these value chains are less

organized. The most important constraint is the atomistic structure of the supply chain which facilitates the emergence of many middlemen and the unnecessary segmentation of value chains. To overcome organizational difficulties, operators have recently created an inter-professional association that assembles all the concerned actors (producers and processors).

Domestic market constitutes the sole destination of the livestock products (raw and processed) in the sense that these products have been considered as non tradable goods, supported in this by public policies aiming at protecting them from imports and foreign livestock products. The average compound protection rates (custom duties) are: Ovine products 304 %; Bovine products 254 % and Poultry products 116 % (Ministry of Agriculture, 2008).

For foreign capital, except for milk where ONA group has a dairy products subsidiary (Centrale Laitière) that gets about 40 % market share, the livestock-based value chains haven't so far known any foreign investment. The existing businesses are owned by national residents either as individuals or as firms or as dairy cooperatives.

Group of Exporting Value Chains: Citrus; Olives and Horticulture

One of the forces of Moroccan agriculture is its exporting side thanks to significant comparative advantages and high value added generated by three main value chains such as fruits and vegetables, citrus, and olive products.

Put together, these exporting chains cover 15 % of total agricultural acreage, contribute 42% to agricultural GDP, represent 75% of total food exports and create twice as much employment as that engendered by cereal value chain. The following table reveals more specifically some of the important features.

Table 3.4 Characteristics of exported goods

Value chain	Share in gross income ¹	Share in employment ²	Share in exports ³	Share in agricultural acreage ⁴
Vegetables	24%	7.5%	22%	9%
Citrus and other fruits	7%	1.5%	24%	6%
Olive products	11%	7.5%	27%	8%

Source: Ministry of agriculture, 2008 and the Author's estimations

1 Total agricultural income \$10 billion

2 Total employment in agriculture 4 million jobs

3 Total food exports \$1.5 billion

4 Total agriculture acreage 8.8 million hectares

The integration of these products to the world market puts a lot of pressure on the corresponding value chains in terms of innovation, improving productivity, and product and market diversification. Operators have no choice but to meet foreign demand requirements at the quantity and quality levels, otherwise fierce competition within international markets will erode their market shares.

As we will show in the subsequent sections, these value chains are at the core of foreign capital presence in Moroccan agriculture. It seems that foreign investors are more impressed and persuaded by world market-driven businesses that offer them more market opportunities and less investment risks.

4. The Investment Framework in Agriculture

The point of departure of Morocco's FDI story is a series of reforms undertaken by the Government in the 1980s, which contributed to improving the country's macroeconomic prospects. These included economic liberalization, the privatization of a number of state owned enterprises and the modernization of the financial sector. To this, one can add a number of investment-related measures implemented during the 1990s, including an investment charter, protection measures and bilateral investment treaties (BITs).

The Government is supportive of FDI. It created the Hassan II Fund, financed partly from privatization receipts, to contribute to projects in which the Government has a particular interest. It has also signed two trade agreements: the EU Association Agreement (in force since 2000), which will establish a free trade zone by 2010, and the free trade agreement with the United States (which entered into force in 2006).

Although it is for the time being difficult and even challenging to assess the net effect of investment promotion public policies on employment and growth, in Morocco there has been a dedicated effort to attract new investment. FDI is one of Morocco's priorities. *Legal, institutional and regulatory reforms to improve the business climate have been undertaken and yet there are neither special, specific measures nor incentives dedicated to FDI.*

Concerning agriculture, there is no specific code or charter dedicated to foreign investment in agriculture. Investment in agriculture, as in other sectors, is partly regulated through the investment charter adopted in 1996, but many important measures on investment remain dispersed among other laws, including incentives.

The features of this investment charter are:

- Simplification and streamlining of administrative procedures;
- Guaranteed transfer of profit and earnings;
- Preferential regime benefiting export enterprises;
- Legal contract granting additional advantages.

Some of the measures could be lined up as follows:

Entry and establishment (streamlining procedures and elimination of some bureaucratic ones)

The Constitution guarantees the right to invest for all. Investment licenses, where required, are granted automatically if no reply is received from the Government 60 days after application.

The institutions in charge of investment are:

- The Department for Investment (Direction des Investissements (DI)), which is transformed to an Investment Promotion Agency (IPA);
- The Regional Investment Centers (CRIs), which act as regional one-stop shops under the auspices of the regional authorities;
- The Investment Commission, which approves special investment contracts and intervenes when problems and obstacles arise;
- The Hassan II Fund, which provides financial contributions for investment projects in key sectors;
- Different Ministries, which can manage directly contracts for sector investments, like the Ministry of Agriculture for agricultural projects.

Despite the multiplicity of institutional actors in charge of investment operations in Morocco that might generate overlapping and competence redundancies, the average time to meet all the administrative requirements and go through the investment process has gone down from more than one month ten years ago, to about one week in 2008.

Treatment and protection of foreign investment (rights and benefits are protected)

Even though the investment charter does not specifically refer to national treatment, there has been to date no discrimination in law or in the experience of foreign investors.

The constitution protects private property with the provision that it may be expropriated by the state for economic and social development needs. In practice there has not been any abuse of the Government's powers. There is no restriction on the transfer or exchange of funds.

International agreements relating to FDI (overarching framework and supportive platforms exist)

Morocco is a member of many international institutions that deal with investment such as:

- International Centre for the Settlement of Investor Disputes (ICSID);
- Multilateral Investment Guarantee Agency (MIGA);
- Inter-Arab Investment Guarantee Corporation; and

- The Convention for the Investment of Arab Capital in Arab Countries.

Morocco has negotiated more than 50 bilateral investment treaties (BITs) and about 45 double taxation treaties (DTTs). Besides being a member of the WTO, it has a free trade agreement with the Arab countries within the Arab league framework, with three Arab countries (Tunisia, Egypt and Jordan) within the Agadir agreement, and with the United States. It also has an association agreement with the EU. These agreements afford investors in Morocco significant access to these markets.

Taxation

According to UNCTAD's survey, Morocco's fiscal system is one of the most criticized aspects of its investment environment. Both Moroccan and foreign business believe the tax burden to be excessive and a hindrance to wealth creation via investment. The overall corporate tax burden has been reduced considerably from 44 % to 35 % through the introduction of firm or corporation tax (IS), although this is still higher than that levied in other comparable destinations for FDI. Business can choose between the IS and income tax (IR). The highest rate for the IR is 40% and 35% for IS. The GOM's commitment is to reduce these rates further to reach that used in similar economies.

Value Added Tax (VAT) applies to all goods and services with the exception of exported goods and services. The normal rate is 20 percent, but reduced rates (7; 10 and 14%) are also imposed. Besides national taxes, over 10 local taxes exist such as trade license tax (Impôt sur la patente), which is based on the rental value of the business premises. Total taxes paid represent about 53% of gross profit in Morocco versus 50% in Egypt and 59% in Tunisia (World Bank, 2006).

Fiscal incentives

Both national and foreign firms operating in Morocco benefit from fiscal promoting actions set by the Government. Although, the Financial Law of 2006 encompasses many of the existing incentives, others measures exist but are difficult to identify because they are dispersed across many texts. Moreover, if we can't assess the degree of their attractiveness to foreign investors, we can affirm that they have at least the benefit to exist and could be improved otherwise. Most of these incentives could be listed as follows:

- All companies exporting goods and services are totally exempt from the IS or the IGR for five years and enjoy a permanent 50% reduction thereafter;
- Agriculture is exempt from the IS and IGR until December 2013;
- Companies operating in many zones such as Tangier's zone enjoy a permanent 50% reduction;
- Incentives are also available in respect of the capital gains resulting from the sale of physical assets;

- Companies do not pay Value Added Tax on building materials or equipments;
- New firms and extensions of firms are exempt from the trading license tax for five years. Beyond this period, firms are only taxed on the first 50 million MAD of rental value;
- New buildings, extensions and building goods and equipment are totally exempt from urban tax for the first five years. Beyond this, the same exemptions and reductions apply as for the trading license tax.

Capital and trade movements

Free transfer of dividends, disposal of assets and capital gains are allowed. All export restrictions and taxes have been removed, apart from licensing requirements relating mainly to security issues. Export and import procedures have been simplified.

Judiciary and legal system

Morocco adheres to the main international intellectual property treaties. Being a member of WTO, Morocco has revised its laws in line with the TRIPS agreement requirements in the sense of adapting the laws to the minimum standards of intellectual property rights protection. Furthermore, the free trade agreement signed with the USA provides for the application of even stricter intellectual property rules. The Moroccan Office of Patent and Commercial Property (OMPIC) enforces the national and international legislation.

The law on freedom of pricing and competition is designed to guarantee free market access and lifting all barriers and restrictions; as well as transparency and fairness in business relationships through promoting competitive culture and behaviour. The commercial courts constitute a front-running element in the institution of a legitimate State and the consolidation thereof in the world of business with the mission of associating economic changes and making more secure the environment in which national and foreign operators have to work.

As for agriculture, besides the general and common measures that benefit all economic sectors, there are some specific measures targeting investment in agricultural activities. Indeed, agriculture was the first economic sector that retained the GOM's attention in the late 1960s, since an agricultural investment charter was set in 1969.

Even though, this charter is not clearly addressing FDI issues, it is considered as the unique legal framework that regulates the bilateral relationships between the State and the private sector (farmers), especially in the domain of managing and developing irrigation (access, pricing, subsidies, etc).

To facilitate and promote private investment in agriculture, a specific fund called “Fonds de développement Agricole-FDA” has been created to manage the allocation of subsidies and financial aids among private investors regardless of their origin. The promoting investment instruments set within this framework have been improved over time to go with the changing opportunities and economic environment in the food sector.

According to the FDA provisions, foreign investors could benefit from agricultural subsidies by submitting the request to the Ministry of Agriculture within new procedures format set since January 2008. Subsidies and premiums cover the following domains:

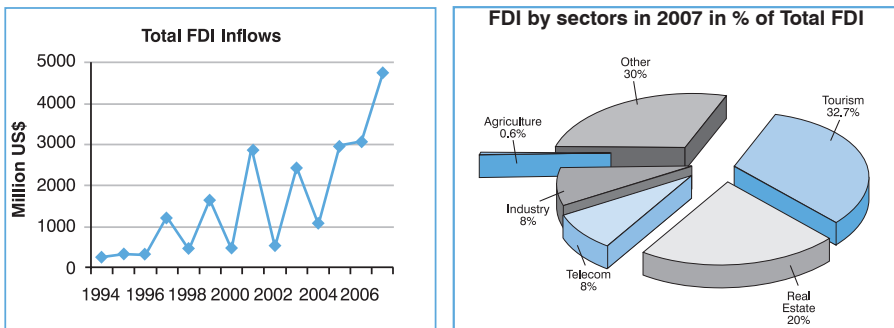
- Farm equipment (tractors, material for sowing and harvesting, ...);
- Irrigation system development and land improvement;
- Livestock;
- Processing: equipment and materials for grains, fruits and vegetables storage, and for olive processing;
- Using nets to protect horticultural products under greenhouses;
- Promoting agricultural exports via air transport of fruits and vegetables, flowers and ornamental plants;
- Arboriculture: Olive, Citrus and forestry trees ; and
- Laboratory analysis.

5 Investments in Agriculture and Food Sectors

5.1 Overview

Since the 1980's Morocco has embarked into economic liberalization and structural reforms. These included the privatization of a number of state-owned enterprises, the liberalization of the financial sector, and the implementation of investment-related measures aiming at facilitating private investment and better attracting foreign investors. These reforms contributed to improving Morocco's macroeconomic prospects and to getting outstanding direct foreign investment outcomes.

Figure 5.1 Total FDI inflows to Morocco (Millions of US dollars)

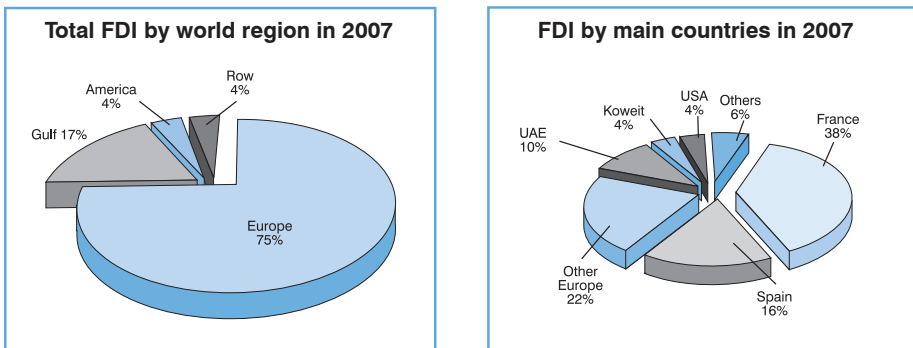


Source: Ministry of Finance & UNCTAD

The breakdown of foreign investments in 2007, shows a predominance of foreign direct investments with a proportion of more than 92% in 2007, followed by foreign portfolio investment with 7.5% and foreign private loans with less than 1% (Cf. annex). The economic sectors that attracted most of the FDI during the 1993-2007 period, are telecommunications with a share of 45%, automotive manufacturing and aeronautical maintenance with 27% of the total amount, banking and insurance services, energy and petrochemicals (about 10%) and real estate (9%). For the agro food sector, it is one of the least important recipients of FDI in Morocco. While agriculture (primary and processing) (excluding fishery products) accounted for more than 20% of Morocco’s GDP, it only received less than 1% of FDI flows between 1993 and 2007.

Europe, especially member-countries of the European Union, has been the first source of FDI in Morocco. The investment share was about 90 % over the last decade, with a significant portion from France and Spain. However, there has recently been major growth in FDI from the Gulf (United Arab Emirates, Bahrain, Saudi Arabia, Qatar and Kuwait) mainly for oil, tourism, property development and to some extent for agro and food processing such as tobacco and edible oil. The Gulf-based investment represented 15% of total FDI inflows to Morocco between 1994 and 2007, at the expense of Europe’s share.

Figure 5.2 Example of FDI flows by origin in 2007



Source: Ministry of Finance

Over the last decade Morocco has been an important driver of FDI to Africa, and in 2005 it was the fourth most popular destination behind South Africa, Egypt and Nigeria, and one of the best performing foreign investment recipients in North Africa. To illustrate this, out of 188 new projects received by this region in 2005, 54 went to Morocco, 43 to Algeria, 42 to Egypt and 30 projects to Tunisia. However, we should notice that Egypt remains the most performing country in terms of FDI stocks. It received about \$29 billion in 2005 against \$23 billion for Morocco, and \$10 billion versus about \$3 billion for Morocco in 2006. The table below gives more details for the top 5 FDI recipients in Africa:

Table 5.1 FDI inflows to Africa as a percentage of all FDI

Country	2004	2005	2006
Egypt	2.1	5.4	10
Nigeria	2.1	3.4	5.4
Soudan	1.5	2.3	3.5
Tunisia	0.6	0.7	3.3
Morocco	1.1	2.9	3
Equatorial Guinea	1.6	1.8	1.6

Source: WIR 2007, UNCTAD

5.2 Foreign Investment in the Agro-food Sector

To put things in perspective, the countries south of the Mediterranean, including Morocco, receive less foreign capital flows than other regions. The top 100 food industry multinationals have created only 160 subsidiaries within these countries, compared with more than 2,000 in Western Europe and about 400 in Eastern Europe (ANIMA, 2005).

However, the numerous assets of the southern Mediterranean countries such as the size and the dynamism of the market and the availability of an abundant labour force in the rural or peripheral urban areas represent important incentives for foreign investment relocations in the area. Firms like Sara Lee, Unilever, Pepsico, Procter and Gamble, Nestlé, have already developed active strategies within this region (ANIMA, 2005). The privatization programs and the liberalization of investment rules carried out in Morocco will entice new foreign investors and retain the existing firms.

Moroccan agriculture and food processing sectors have for a long time been the subject of public intervention. For example the predominance of an important public sector, subsidies, price setting and market regulations, and rigorous foreign trade policies (tariffs, licensing, quotas, etc). However, voluntary public policies such as liberalization of key markets, privatization, proactive foreign investment policy, appropriate institutional settings, the adherence to WTO and the conclusion of many trade agreements with its main partners (EU, USA, Near East countries), launched and carried out early 1990s have been in favor of opening up the food sector to the world market, i.e. opening up to foreign enterprises and to foreign competition in the domestic market and in foreign markets as well.

Production of fresh and processed food products, supplies both the local market for principally cereals, sugar, oil, milk, meat, and exports for vegetables, fruits, fish and canned vegetables. Regarding the industrial chain of the agro food sector, it is worthwhile noticing that the small and medium size firms represent more than 95% of the industrial fabric, but only provide 45 % of industrial production

against 55% for the 50 largest enterprises. The large entities are either owned by domestic/national groups such as ONA (sugar, dairy, oilseeds, and distribution), DYANA Holding (fruits, grapes and wine), HOLMARCOM (mineral water, Pepsi) or by foreign corporations or firms (distribution, fruits and processing fruits, olive products).

About 150 foreign firms existing in Morocco and operating in the agro food sector make up for one third of the production, more than 40% of investments, the like in exports and 30% of employment. The much known enterprises are:

- Dairy products: Nestlé and Danone;
- Cheese industry: Bel cheeses;
- Sodas industry: Coca-Cola, Pepsi-Cola, Virgin-Cola, Cobega, Altadis;
- Edible oils: Lesieur Cristal, Savola;
- Wine products: Castel;
- Yeast industry: Lesafre;
- Chocolate and confectionery: Bam's, Cadbury Schweppes, Clark Gum Company;
- Food processing: Kraft Food, Best Food;
- Canned goods: Amora, Vanelli, Bongrain.

The last decade has seen important foreign investment in the sector through acquisitions such as:

- The "Brasseries du Maroc" by the French group Castel ;
- The "Régies des Tabacs" by the Franco-Spanish group Altadis; and
- The local subsidiary of Coca-Cola by Spanish group Cobega

In Morocco, the big multinational groups such as Altadis, Savola and Danone, continue to invest regularly in the agro food sector. In 2006, the Franco-Spanish cigarette manufacturer Altadis was behind three projects, including a project of reconversion of tobacco fields into olive groves, in addition to their tobacco operations. This project fits within the Moroccan Government strategy to promote olive products.

According to the MIPO observatory, Morocco is still the country that attracts the most FDI projects in numbers in the Southern Mediterranean region (Algeria, Tunisia and Egypt). In 2005, 118 projects against 97 in 2004. The official FDI figures (Office des Changes) amount to 1,354 million Euros in 2004 and 2,472 million Euros in 2005.

To illustrate this significant interest, the following table shows some figures for the main investors in 2005 (ANIMA, 2005):

Table 5.2 Main investors

Investors	Number of agri food projects	Amounts declared In Million Euros
France	48	560
Spain	15	334
USA	9	262
Canada	6	----
Germany	5	----
Emirates	4	417
Italy	4	----
UK	3	----

The leading projects announced in 2005, concern tourism, materials, chemical products and infrastructure. Agriculture and food processing per se were not covered, except the investment on production of fertilizers and phosphoric acid coming from Pakistan for 200 million Euros and Brazil for the same amount (Ministry of Economic Affairs, 2007).

As a result of the leasing state-farms strategy (agricultural land previously under the management of a public institution “Société de Développement Agricole (SODEA), through the tender procedure, new sources of foreign direct investment and skilled management to the sector have been attracted. In 2004, 41,837 ha of agricultural leases were issued, generating 4.7 billion MAD (\$610 million) in revenue for the state. According to government statistics, foreign holders of these leases injected 25.3 million MAD (\$3.28 Mio) into the sector in 2006.

A similar tender involving an additional 38,731 ha of state farmland was concluded in early December. While the final awarding of the leases will not be announced until early 2008, it has been acknowledged that a large number of bids were made by agricultural businesses from France, Egypt, Spain and the United Arab Emirates.

As mentioned before, this land is owned by the state (Domain type). Because of the existing text that prevents foreigners from buying agricultural land, the government concedes this land to private promoters (nationals and foreigners) within a long term renting framework. Contracts are then set and signed with the Ministry of Agriculture in order to comply with the terms of the tender (investment amount, number of jobs, technology, etc.)

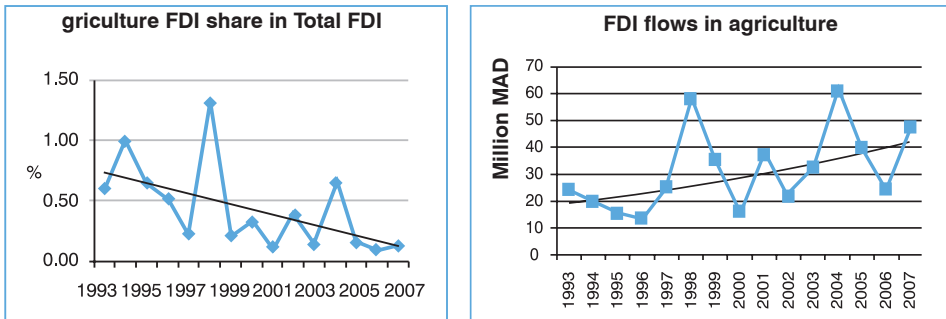
5.3 Foreign Investment in Agriculture

As the detailed data on foreign investment in agriculture (nature and content) are not available at the national level, we shall mention that for the sake of this study, the investment issues will be addressed through: global FDI flows in agriculture over time, and empirical analysis of FDI inflows into agricultural activities within

principal agricultural regions.

To appreciate the role and importance of agriculture in terms of total FDI received, one needs to examine the dynamics of foreign investment in agriculture through time (1993-2007) in absolute terms and with respect to the inflows into the whole economy (all sectors included).

Figure 5.3 Evolution of FDI flows in agriculture



Source: Ministry of Finance, Morocco.

As these two graphs show, the level of FDI flows received by the agricultural sector has been very low. The share never exceeded the 1% level, except in 1998 where the additional amount of inflows was due not to new foreign investment, but to increased acquirement of raw materials and equipments by existing foreign-owned farms.

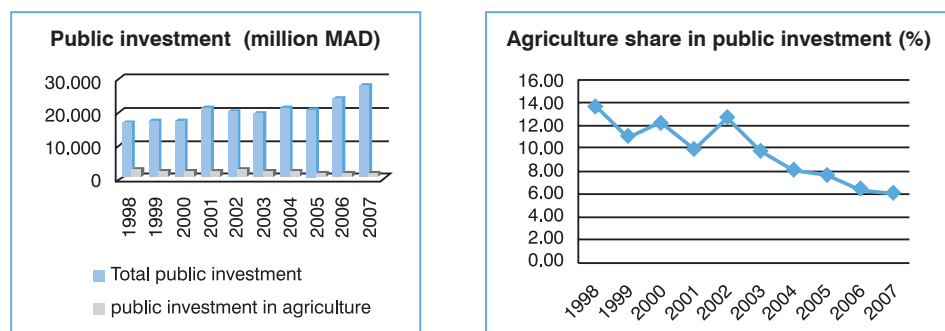
The share's trend shows clearly the decreasing importance of agriculture and its insignificant portion in the flows of total FDI attracted by the whole economy, even though the FDI level has been climbing since the mid 1990s.

With respect to other economic sectors such as tourism, real estate and telecommunications, agriculture is the least important sector that has benefited from foreign capital since the early 1990s.

5.4 Public Investment in Agriculture

Since mid 1980s, the State in Morocco has allocated 13 to 15% of public saving to finance agricultural infrastructures (not accounted for the cost of dam construction), i.e., about 2 billion MAD per year on the average. Irrigated agriculture has been up to now the privileged component with a budget share of 60%.

However in relative terms, the agriculture share in public investment has seen a structural decline since late 1960s starting from 35% in 1969 to 6% in 2007. Public investments in agriculture have been devoted to essentially irrigation equipment and integrated development projects in some selected rain fed regions.

Figure 5.4 Public investment in agriculture

6. Case Studies on FDI in Agriculture

Information and data available on foreign investment in agriculture or in food processing, even within public structures in charge of foreign investment, are not sufficient to address the FDI issues as required by the present study's terms of reference. However, to characterize foreign capital in agriculture and determine some of the investment constraints, we used the results of a survey carried out in 2004-2005 in three main and important agricultural regions in Morocco known to be the most preferred zones by foreign investors.

The Souss-Massa region is localized in the western south of Morocco in the area of Agadir city. Because of its favourable climate (temperatures and sun), this region is the first supplying zone of early fruits and vegetables; it represents 46% of the national acreage, it provides 65% of production and supplies 75% of exports. The Loukkos region is characterized by its Mediterranean climate which is suitable for the production of products like strawberries, asparagus, potatoes and melon. Its proximity to the city of Tangier facilitates the export operations. Besides having a Mediterranean climate, the Gharb zone is also influenced by the Atlantic Ocean which allows producing high value added crops such as strawberries, industrial tomatoes and bananas. It is located north of Rabat- the administrative capital of Morocco.

6.1 Structure of Investments in the Three Regions

Foreign investment in agriculture concerns the acquirement by foreign investors of physical capital directly used in production operations such as tractors, irrigation equipments, greenhouses and irrigation pivots. Other investments indirectly related to agricultural production are essentially those assigned to machines, equipments, buildings, storage spaces used for packaging and storage.

- Types

Two types of foreign investment are carried out in Moroccan agriculture: (1) Direct investment in production operations, and (2) subcontracting.

It is the most frequent form of foreign investment in agriculture within Morocco. It represents about 90% of total foreign investment in agriculture. In this case, the investor either creates his own firm or shares agricultural business creation. It implies that foreign promoters pay totally or partially for initial costs like space or land rent, land management, digging wells and drilling, irrigation equipment and other necessary materials for farming operations. The investor is consequently involved in replacing and maintaining the existing capital and also in insuring the proper functioning of agricultural operations (seeds, fertilizers, phytosanitary products, etc).

This type of foreign investment in agriculture is relatively new compared to FDI. It concerns almost 9% of total foreign investment in this sector. It is actually a crop's contract set between investors and farmers in order to ensure labour availability and avoid labour conflicts. On the other hand, the investor is committed to supplying seeds and to purchasing the farmers' production at the agreed upon price. This kind of contracting is mainly used in the case of strawberries, industrial tomatoes and peppers (Niora).

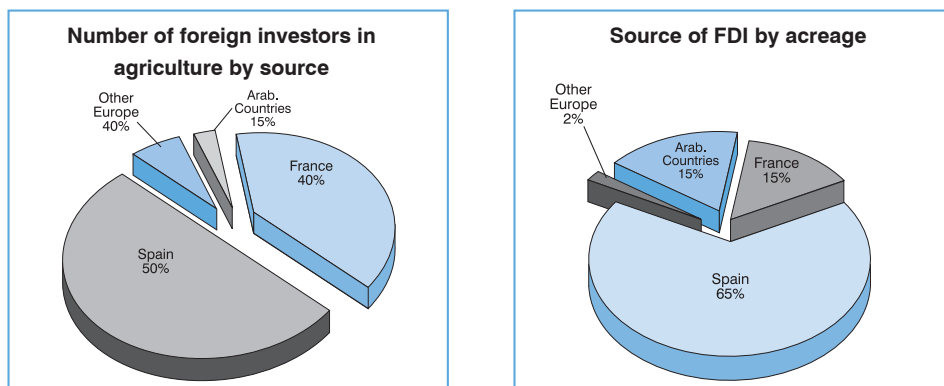
- Sources of foreign investment by country

As described previously, like the FDI inflows into the whole Moroccan economy, Europe remains the predominant source of foreign capital in agriculture, followed by Arab countries. To illustrate this, let's take the case of a sample of 42 projects implemented in 2004 as shown by the following table:

Table 6.1 Foreign investment inflows by source

Source	Number of foreign investors	Acreage (Hectares)
Spain	23	4630
France	15	1180
Arab countries	1	685
Switzerland	1	45
Czech Republic	1	43
Netherlands	1	17
Total	42	6600

These figures confirm the importance of Spanish and French capital inflows into agricultural activities, and reflect the national pattern of FDI in agriculture as a whole:

Figure 6.1 Source of FDI flows in agriculture

Source: Survey, 2004

To better characterize different sources of foreign investment in Moroccan agriculture, we will focus, in the coming section, on the four dominant investors, i.e., French, Spanish, intra-regional investors and Moroccans residing abroad.

Spanish investments

As shown in the graphs above, Spanish investors represent half of the total number of foreign investors and the corresponding investment covers about 65% of agricultural acreage. As for the commodities or products concerned by this investment in terms of acreage, we should mention strawberries produced under subcontracting (12%), standard crops such as cereals, rice, sunflower (13%), nursery (5%) and fruits and vegetables (70%). The localisation of Spanish investment (in terms of number of investors) is spread over Souss (55%), Loukkos (35%) and Gharb (10%) (Survey Data 2004).

French investments

Ranked in second after Spanish investors, French investors' interest is in intensive horticultural crops produced in greenhouses. They have embarked during the last decade in the production of herbs (8%), floriculture (10%), animal production (7%), fruits and vegetables (75%), organic crops and other varieties of tomatoes and green beans.

In terms of investment localization, French investors are mostly interested in regions that are suitable for niches such as early time horticultural products to be exported to Europe during Europe's winter seasons. That is why they concentrate their investment activities in Souss-Massa (Agadir) zone (about 80% of their investment amount goes to this zone), with the remaining 20% to the Gharb region (Survey data, 2004).

These two specific foreign investments concern all production operations within the farm and also packaging and transportation.

Intra-regional investments

Investors from the Near East region have always been present in Morocco. In 1992, a joint venture was created between Moroccan public institution (SOGETA) and other Arab countries (Kuwait, EAU, Iraq, and Saudi Arabia). The Moroccan party offered 684 hectares versus funds coming from the other Arab parties. This investment focused on producing cereals, sunflower, tomatoes, and corn. This experience was not that successful.

In the last few years, investment from the Arab Gulf States has intensified largely as a result of the shift in flows of petrodollars away from the American market and the increase in the price of oil that has allowed Arab investment across North Africa to flourish. In addition, cultural and linguistic ties have made it easier for investors in the region to do business with their Moroccan 'brothers'. Large-scale and big budget Arab investment is particularly noticeable in the real estate and tourism sectors. However, other sectors are also reaping the rewards. Investment in industry and the service sector is increasing and large-scale projects in horticulture and fishing are on track to rise as a result of the Free Trade Agreement with the United States.

However, because of the ongoing world financial and economic crisis, one can expect these investments to stagnate if not a decline.

Investments by Moroccans residing abroad

In Morocco, remittances increased to approximately US \$5 billion in 2006, a trend set to continue in 2007. Contrary to misconception, the approximately 3 million Moroccans residing abroad are sending increasing amounts of money back home. In fact, remittances to Morocco have risen steadily since the last decade, officially reaching 9% of GDP. Unofficially, the figure is probably much higher as not all remittances go through official channels such as banks and post offices, but rather are hand-carried back to Morocco.

According to a study carried out by the Hassan II Foundation (Observatory of Moroccans Resident Abroad), more than two thirds of remittances are used for household consumption. This has a positive impact on reducing poverty, but little impact on general economic development. Only 7.7% of the total amount received as remittances is invested permanently, primarily in real estate. Only 28% of them invested productively in Morocco.

A study by the Hassan II Foundation also confirmed the prevalence of small projects: 40% of projects cost less than 500,000 MAD whereas those over 5 million MAD represented only 14% of total investment. Large-scale investment was focused on the industrial sector, whereas the small projects are mainly in the agricultural and commercial sectors.

In fact, emigrants invest more and more in the service industry to the detriment of agriculture. Agricultural investment has been reduced by 38% between 1998 and 2007 and now represents less than one third of total productive investment.

In contrast, the share of investment in services (commerce, restaurants, hotels and recreational services) has gone up by more than 44%, thus constituting more than 65% of total productive investment from emigrants.

6.2 Sectors of Foreign Investment

In general, five different categories of foreign investors are operating in the agricultural sector. The following table distinguishes between their dominant activity in their home country (before coming to Morocco) and after their delocalization to Morocco.

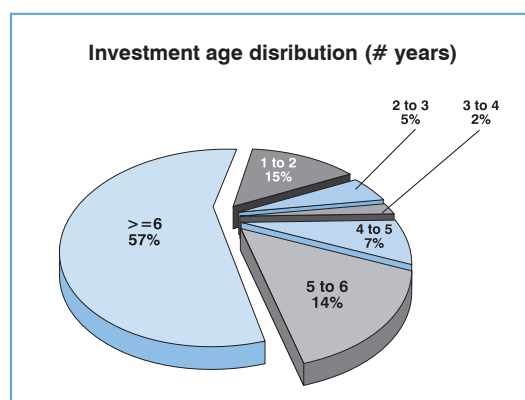
Table 6.2 Main activities of foreign investors

Profile	Homeland activity	Main activity in Morocco
Producers & marketing operators	Production & marketing	Production & marketing
Producers	Production	Production & marketing
Marketing operators	Marketing	Production & marketing
Contractors	Production & marketing	Crop contracts with local producers
Particular cases	Research and development firms, industry firms, seed producers	

The most frequent foreign operators are those that undertake both production and marketing operations. The crop contracting operations are used only by strawberry producers, especially Spanish investors, to ensure industry procurement so that their export market shares are not eroded.

The age analysis of foreign investment implemented in agriculture in Morocco reveals that FDI is not a very known and old phenomenon since the average age is about nine years. The following chart gives the investment distribution per age:

Figure 6.2 Age of foreign investment in agriculture



Source: Survey's data, 2004.

6.3 Regional Distribution of Foreign Investors and Agricultural Commodities

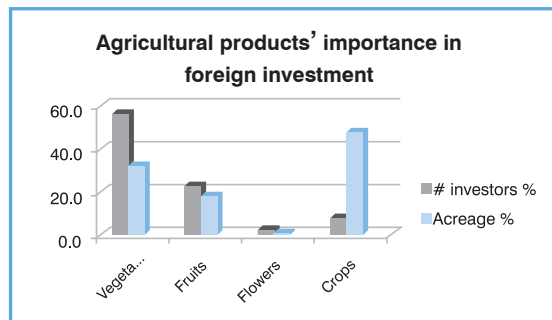
The analysis of the survey's results in the three main agricultural regions described above shows a net dominance of Souss-Massa zone (Agadir) in attracting more foreign investors (about 65% of the total number identified by the survey). The other two northern regions (Loukkos and Gharb) represent 20% and 15%, respectively.

The preeminence of the southern region could be explained by its special characteristics in terms of climate and soil, adapted and suitable for crops and products investors are planning to produce. The following are both the types of goods investors are producing and the regional distribution of the commodities produced.

Types of commodities

The agricultural commodities that concern almost exclusively foreign investment in Moroccan agriculture are plant-based- products. There have been so far no significant foreign investors' interests in raising livestock or producing livestock-based products. The following chart reflect this pattern. Four commodity groups are concerned: (1) Vegetables attract more than 56% of investors and 33% of total acreage covered by foreign investment, (2) Fruits with 17% and 19%, (3) Crops with 18% and 48%, and (4) Flowers with only 3% and .7%, respectively.

Figure 6.3 Importance of crops in foreign investment



Source: Survey's data, 2004

The second fact about commodities is the skewed distribution of each group with respect to the products it contains. Regarding the group of vegetables, investors put more emphasis on tomatoes (15% of the total acreage targeted by foreign investment) followed by asparagus with 9%, green beans with more than 3% and herbs with 2.5 %. As for fruits, strawberries come first with about 10 % then citrus with 7%. Rice, wheat, sunflowers, industrial tomatoes and peppers

monopolize about 42 % of the acreage. On the contrary, flowers and ornamental plants are produced by one to two foreign investors and cover few hectares.

Commodity regional distribution

The third salient fact is the specialization of agricultural regions in terms of the allocation of foreign investment. According to the survey that reflects to some extent the national patterns, the southern part of Morocco (Agadir zone) is specialized in tomatoes and green beans, while in the mid-region, foreign capital is allocated to rice, citrus and wheat. In the northern region, foreign investment is specialized in more commodities such as strawberries, asparagus, industrial tomatoes and sweet corn. Specifically, the Souss-Massa region includes tomatoes (59%) and green beans (12%) as well as herbs, zucchini, asparagus, melon, flowers, and others all under 10%. The Gharb region includes asparagus (29%), strawberries (20%), industrial tomatoes (11%) and sweet corn (10%), as well as sunflowers, industrial peppers, wheat and others all under 10%. Lastly, the Loukkos region includes rice (41%), citrus (15%), wheat (14%) and strawberries (10%), as well as industrial peppers, sunflowers, industrial tomatoes, avocados, and ground nuts all under 10% of allocation in terms of hectares (Survey data, 2004).

7. The Impact of FI on Agricultural Production in Morocco

7.1 Types of Impacts

Impact on Production: Diversification

Up to mid 1990s, tomato has monopolized the agricultural production rotation plan. However, with significant foreign capital inflows into agriculture, beginning in 1997, Moroccan production of mainly fruits and vegetables has seen a net diversification towards a variety of commodities such as green beans, zucchini, avocado, strawberries, sweet corn and asparagus. Even for tomato, its production has improved in terms of new varieties and types such as cocktail & cherry, plum, beefsteak and Marmande.

We could affirm that foreign investment has largely contributed to this diversification. It was the result of considerable investment in new technology, in logistics and in cold chain, so to meet international markets' demand, notably the European's.

Impact on Production: Technology Transfer

The presence of foreign investors in Moroccan agriculture has been of great benefit to some sub-sectors like the horticulture. Their input incited all producers, including nationals, to modernize their business and to use new efficient techniques of producing and managing their farms and agro businesses. The

outcome was a structural technological change in the horticultural sector and in the export sector of agriculture in Morocco, especially in the Souss-Massa region.

Technological mutation has brought about new ways and methods of farming through for example, the introduction of new seeds and plants, new crop varieties, efficient irrigation techniques (drip irrigation) and new resources management techniques. This has resulted in significant yield improvement, mitigating drought effects, and applying better mechanisms of organization, of production and distribution. Comparing yields and production volumes for vegetables such as tomatoes, before and after foreign investors' installation and also foreign investment-based yields with their corresponding in national farms, we can say that yields have more than doubled during the last 15 years.

Impact on Quality and Traceability

In order to meet the quality requirements of external markets, foreign investors have taken the lead in producing high quality fruits and vegetables. They took the initiative to introduce control and traceability techniques on the farm through the channel's distribution till the market platform.

Standardization enables Moroccan products, via foreign investors, to get the acceptance of traders and satisfaction of foreign consumers. It also allowed investors to comply with the security regulations and labour code such as work conditions, social security, retirement conditions and pensions.

The development and use of international standards (ISO system) and of quality assessment techniques (HACCP, Eurep-Gap...) by foreign investors have had positive impact on the domestic market and made the consumer pay attention to food quality. Because of competition and consumer requirements, national producers are forced to adopt quality-driven methods of production. This has also contributed to the upgrading of Moroccan legal and institutional framework that governs the quality system in general (e.g. control and certification of production and processing techniques and conditions).

Impact on Marketing

Foreign investors intervene in the integrated sector ,i.e., many different functions are carried out by the same operator who looks to place products in high paying markets known as brand markets.

Foreign investors take care of the production, the packaging, the transportation and the distribution and all the logistic operations for their products. As a result, the average delivery time from the most distant production zone (Agadir) to the European market (Spain as the first entry by truck) has come down from 24 hours in late 1990s to less than one day (8 hours) today.

In general, the competitiveness of foreign firms operating in early vegetables is perceived through their production's diversification, the innovation and exploring new markets. Indeed, adequate logistics as well as stable and well organized marketing networks, provide foreign exporters of early vegetables like tomatoes with valuable market opportunities and competitiveness compared to their market rivals.

Other Impacts

In general, the overall impact of foreign investment in agriculture is not so clear-cut. One counter fact of this is that foreign investors may get the benefits at the detriment of small to medium size farms, by reaping for example, more market shares. In the case of early tomatoes produced in greenhouses, foreign capital monopolizes about 40% of Moroccan exports (in volume) at the expense of national exporters who wish to export directly without going through foreign marketing channels and commissioners.

At the production level, since foreign capital is relatively not dominant or present in very specific agricultural activities, i.e., high value added fruits and vegetables, the domestic farms and firms crowding out phenomenon is likely not occurring. On the contrary, we could affirm that foreign investors might serve as leaders in terms of using new technology, adopting efficient management techniques and exploring new markets. The negative effect on the export side could be overcome by coordination/cooperation and partnership between national producers and foreign investors.

As for the balance of payments, we do not have enough data to assess clearly the net effect of FDI in agriculture. Two components are directly concerned, trade balance and capital account. In gross terms, everything else constant, we can say that FDI in agriculture may raise trade and capital and thus contribute positively to Moroccan balance of payments. However, one needs to take into consideration many other counter effects. An example is that foreign investors may be spending more on imported materials, equipment, and agricultural inputs (seeds, fertilizers, phytosanitary products ...) than on inputs procured on the domestic market. This means that the financial capital leaving the domestic economy to pay for imported inputs, could be more than the inflows. In fact, this phenomenon may also hold in the case of nationals that export agricultural products. The example of some exported vegetables illustrates this effect.

Referring to the survey results, the imported portion of the exporting price of one tonne of early vegetables to the European market represents about 65% for tomatoes and strawberries, 40% for peppers, 55% for potatoes and about 42% for green beans. This is to say that the net effect of fruits and vegetables exports on the balance of payments is not that obvious.

Despite some of these facts and that inflows into agriculture are modest relative

to the investment potential, one can infer on the average, the impact of FDI has been positive, leading to job creation, transfer of know-how and technology, and training of human resources as a result of increasing production and exports. The direct effect of FDI in agriculture has also been reinforced by non-agriculture FDI's indirect effect, especially in tourism, real estate and telecommunication that represent on the average 33%; 20% and 8% of total FDI, respectively. This comes in the form of additional demand of foodstuffs, of facilitating the connection of producers to local markets and even modern markets (supermarkets, notably) and of reducing transaction costs of agricultural marketing. On the other hand, increasing FDI in tourism and real estate may have negative effects on agriculture since they compete for land, funds and labour. Actually, a substantial amount of agricultural land surrounding cities has been lost to tourism and real estate activities.

In general, FDI has increased its position in relation to total investment in Morocco, passing from 6 percent of gross fixed capital formation for the period of 1990–1995 to 12.7 percent for the period of 1996–2004. In 2007 the figure reached 22%, which compares well with Morocco's neighbours and other countries with similar economic patterns.

8. Determinants and Obstacles of Foreign Investment in Agriculture in Morocco

From the studies we have done on foreign investment in agriculture, with the support of graduate students at the Agronomic Institute in Rabat, we came up with many factors that could explain the foreign investor's decision to invest in agriculture in Morocco. Using ad hoc weighted proportion for each factor, these factors include the following: labour cost; climate characteristics, European market closeness, fiscal incentives, political stability, opportunities of investing in food processing, raw material availability, domestic market demand, access to real estate owned by the State, infrastructure quality and foreign languages usage.

As far as obstacles are concerned, empirical studies led to two kinds of constraints: (1) constraints occurring during the implantation process of the investment, and (2) constraints related to the operating phase of the project.

Under the first type of constraints, foreign investors often come across information deficiency in the sense that information and data about investment opportunities and procedures is not available and most of the time not accessible for all. It looks like there is a lack of communication strategy and information diffusion regarding investment on the part of institutions in charge of promoting foreign investment. Foreign investors complain about having many interlocutors when they choose and implement their projects, because it is time and financially consuming and above of all this they may get the wrong choice.

For the second type of obstacles, we will list the issues as follows:

- Real estate issues: Besides the prohibition of buying agricultural land, long term renting contracts must be enforced;
- Labour: In the absence of the implementation of labor law or the fuzziness of some its provisions, especially the right to strike, and the long lasting social dialogue, foreign investors show a certain disarray when it comes to managing human resources;
- Bureaucratic hurdles such as complicated and unclear procedures as well as corruption;
- Domestic market: For foreign investors, Moroccan domestic market remains less developed, despite the number of consumers, because of low salaries and weak real income;
- Exporting constraints: Foreign investors, like their Moroccan homologues, face the same export barriers (entry price, quotas, prohibiting tariffs) set by Moroccan trade partners like the EU member countries, especially for fruits and vegetables;
- Lack of efficient and sufficient facilities (roads, highways, telecommunications, ...);
- Relatively very expensive financial capital; and
- Complicated legal procedures and judicial delays.

On the basis of the survey and interviews with foreign investors already operating in agriculture in Morocco, we identified 13 factors perceived by these investors as key determinants of the investment decision. They are ranked as shown by the following table:

Table 8.1 Determinants of investment in agriculture

Determinants	Rank	% of foreign investors identifying the factor as major
Labour cost	1	41
Climate characteristics	2	38
Political stability	3	35
Closeness to European market	4	34
Policies to promote foreign investment	5	30
Fiscal incentives	6	28
Opportunities to invest in agro processing	7	13
Domestic market demand	8	7
Legal framework	9	5
Infrastructure quality	10	4
Raw products availability	11	3
State land concession	12	2
Foreign language use	13	2

9. Agricultural Policy Issues

The reforms undertaken by Moroccan Government (GOM) have to some extent contributed to trigger inflows of FDI. The challenge is to raise these flows and ensure their sustainability and their contribution to the country's development objectives. Despite the net increase in FDI flows since the early 1990s, they remain volatile due to big privatizations.

While the challenges facing Moroccan agriculture - water, irrigation, land tenure, small size farms, lack of investment and infrastructure in rural areas - are difficult, they have not changed much since independence, in the early 1960s. The length of time the Moroccan state has had to address these issues and its mixed record in terms of achieving its outputs, outcomes and ultimate goals, suggests that there is a prima facie case that either agricultural policy has been misguided, implementation and administrative effectiveness has been poor, the resources devoted to the sector have been inadequate, or some combination of the three.

There have been a series of government policies, beginning with the Investment Code of 1969, to address land tenure issues and provide title to small farmers, but almost nothing has been achieved on the ground. Instead the land distribution which has occurred, has favoured large farmers. The combination of subsidy, trade and price setting policies which existed through the mid-1980s made matters worse, encouraging a crop mix and consumption patterns at odds with Morocco's climactic and geographic conditions. The liberalization of the 1980s has only partly resolved these problems. In the last fifteen years, there has been substantial investment in rural infrastructure and education, with substantial progress in the former but progress in reducing illiteracy and poverty will require more time.

Carrying on the restructuring process, the GOM has pursued a strategy of leasing state-farms previously under the management of "Société de Développement Agricole" (SODEA). The tender procedure for leasing government lands has thus far been successful in attracting new sources of FDI and skilled management to the sector. In 2005, about 41,000 ha of agricultural leases were issued, generating 4.5 billion MAD (\$600 million) in revenue for the state.

According to government statistics, foreign holders of these leases injected 25.3 million MAD (\$3.28 million) into the sector in 2006. A similar tender involving an additional 38,700 ha of state farmland was concluded in 2008 and 15% of total expected investment amount (6.5 billion MAD) represent FDI portion. Foreign investors are mainly from France, Egypt, Spain and the United Arab Emirates.

9.1 New Agricultural Strategy

Besides the state-land lease program, the GOM came up with a new agricultural strategy baptized "Morocco Green Plan" which puts agriculture back into the

development equation as the principal growth engine and means for poverty reduction. This strategy is articulated around two pillars: (1) Developing modern agriculture by developing and promoting high value added value chains around integrated and aggregated projects, and (2) implementing regional development plans aiming at restructuring and aggregating projects to promote social agriculture built on solidarity upgrading.

This strategy is built on six main ideas:

1. Clear belief: Agriculture as principal growth engine and poverty reduction lever;
2. Non exclusive agriculture, but differentiated strategies according to stakeholders and zones;
3. Aggregation models: innovative and adapted to value chains and socially fair;
4. At the core of the equation : The investment objective is 10 Billion MAD per year;
5. A pragmatic approach: 1,000 to 1,500 integrated projects;
6. All value chains are concerned: modern and traditional.

The government's ambition is to attract national and international investments that amount to 150 billion MAD (\$18 billion) by 2020 so that agricultural value added would be almost three fold. More than 10,000 projects will be financed and carried out and will be at the direct benefit of 1.4 million farmers and 3 million rural inhabitants.

The main feature of this strategy with respect to past reforms is to distinguish between growth-driven projects and equity and social-driven projects. It also uses the concept and approach of aggregation. It is simply the association of all actors operating within a given value chain (farmers, processors, distributors) to use collectively the resources and ensure the integration of all components from upstream down to the consumer. This scheme will facilitate farmers' access to sufficient funding and financial leverage, besides acquiring know-how and new technologies.

For the implementation phase, this strategy is broken down to 16 regional plans corresponding to administrative and economic regions and covering all the Moroccan territory. The bottom line is managing space and allocating resources on the basis of specialization of each region according to its comparative advantage. Six value chains are at the core of resources allocation (land, water, financial capital). The following table gives the corresponding expected investments for the next 10 to 15 years.

Table 9.1 Expected value chains' projects in the Morocco Green Plan

Value chain	# of projects	Expected investment (Billion MAD)
Cereals	222	11
Citrus	54	9
Olive	314	17
Fruits and vegetables	244	24
Poultry	78	6
Dairy products	96	12

Source: Ministry of Agriculture, 2008

The new agricultural strategy is indeed a strategic framework to attract FDI into agriculture and is in line with the Government's reforms policies that support other sectors identified in the Plan Emergence (electronics, agribusiness, processed seafood, the automotive and aeronautical industries, off shoring of services, and handicrafts) and in the Tourism Plan. The principal actors in investment promotion of agriculture and on-the-field-implementation are the newly created Agency for Agricultural Development (ADA) under the Ministry of Agriculture and Regional Investment Centers (CRIs) under the regional governor's authority.

10. Conclusion

There is a general consensus about FDI importance in agriculture and its dynamic role in boosting growth and creating jobs in rural areas. Yet, existing foreign capital in agriculture as compared to other sectors is too weak (less than 1% of total FDI received by Moroccan economy). This low level could be explained in a broad sense by a communication deficit regarding real opportunities in Moroccan agriculture and by lack of appropriate policies targeting foreign investors.

The existing foreign investors are mostly attracted by high value added fruits and vegetables because of comparative advantages in main regions (Agadir) with appropriate climatic conditions, as well as the northern Atlantic front with sufficient water and proximity to Europe (Morocco's principal market). Specific commodities or a group of commodities such as strawberries in the north, tomatoes in Agadir are then targeted on the basis of their competitive advantages and export opportunities especially to European markets.

FDI in agriculture is exporting-driven investment in the sense that investors produce commodities either to be sold as raw products (tomatoes, oranges, clementines, asparagus...) or as raw inputs for processing industries elsewhere.

Foreign investment in agriculture has had a real positive impact on technology transfer, know-how, crop yields and on productivity in general rather than a

source of reducing or financing the balance of payments deficits. Foreign capital has also contributed to:

- Crescent integration of Moroccan agricultural economy into the world market; and
- Better allocation of resources in using agricultural production potential.

In terms of investment perspectives, Moroccan agriculture is becoming an industry with good prospects. Adequate and proactive public policies are put together to attract foreign capital into agriculture and to facilitate private investment operations. There is also the GOM's commitment to eliminate obstacles related to land access, bank loans and irrigation water use. This is what public authorities are declaring and planning to do. The challenge is getting these policies down to the field.

The new agricultural strategy (Plan Maroc Vert) is considered as a road map for private investors. Its success depends on how effective the marketing and communication campaign around its content and programs will be. Other incentives might be in favor of attracting and promoting foreign investment in agriculture. We could notice for instance, numerous signed or expected Free Trade Agreements (USA, EU, and Arab League members), Morocco's proximity to Europe, financial aid and incentives, and specialized and less expensive labour and human capital.

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Sudan

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This paper has been revised and condensed from its original form

1. Introduction and Overview

This paper is an attempt to provide information about foreign investment in Sudan. The intention is to highlight the main features of the Foreign Direct Investment (FDI) as well as to portray the overall investment climate in the country. To achieve this, three broad sections have been developed: the first section deals with the general trends of investment in Sudan, the second one treats the investment climate in terms of the Investment Law and the business climate, and the third section looks into the impact of FDI. There is an introductory section that gives an over view of Sudan and its agricultural sector.

The non-oil sub-sectors of Sudan from which the poor earn their living like those of agriculture and non-government service grew at slower rates over the period (1986-2005), compared to the sub-sectors of the non-poor. For instance, while average annual growth rate of income from agriculture, has increased from 3 percent over the first sub-period (1986-1995) to only 6 percent over the second sub-period (1996-2005), the average annual growth rate of income from mining increased from 24 percent over the first sub-period (1986-1995), to 53 percent over the second sub-period (1996-2005).

Foreign capital investment in agriculture has been growing at an average annual growth rate of 23 percent over the period (2000 - 2008). Its annual average increased from US \$77.5 million over the sub-period (2000-2004), to US \$ 256.5 million over the sub-period (2005 - 2008). Thus, FDI in agriculture has been gaining momentum over the period indicating a sustained investment climate.

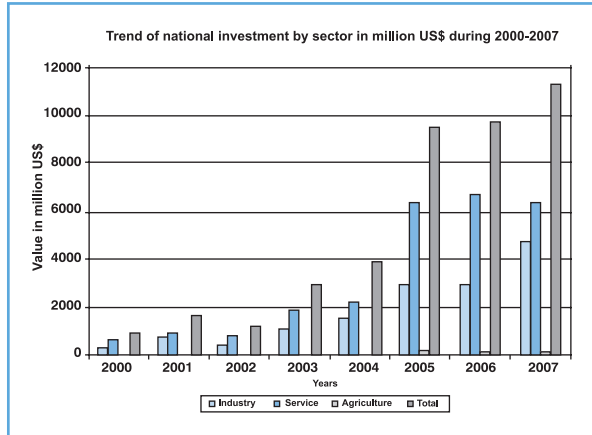
The results of this study show that the Arabs, compared with other nationalities, have a strong and growing presence in agricultural investment in Sudan. Arabs invested US \$955.35 million which represents 91.3 percent of total foreign direct capital investment in agriculture in Sudan over the same period. Arab agricultural capital investment in Sudan has been growing at an average annual growth rate of about 9 percent.

Results also show that total number of jobs created by total FDI in agriculture in Sudan over the whole period amounted to 6584 jobs. While 4596 jobs are due to Arab investments, the remaining 1988 jobs are due to non-Arab investments. When measured by the capital/labour intensity (K/L), the Arab investments created less jobs relative to their capital investment because their (K/L – 0.25) is relatively high.

As discussed further in the paper, the regional location of FDI contradicts the principle of vertical equity. This is because 86.4 percent of total FDI capital in agriculture in Sudan, is allocated to the three most developed regions in the country; namely Khartoum, the Northern, and the Central regions. This deprives the least developed regions; namely, the Western, the Eastern, and the southern regions of FDI. The Khartoum region which is the most developed region in the

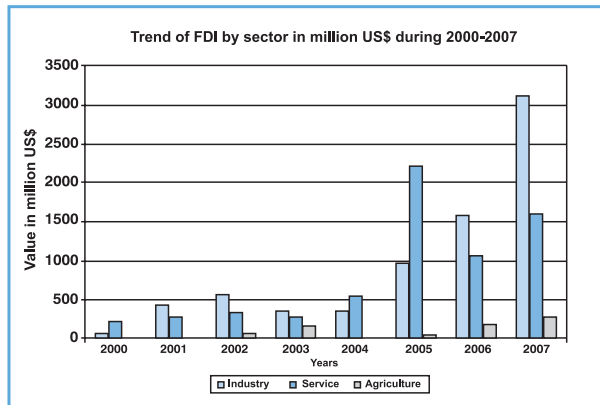
country, attracted 46.1 percent of total FDI in agriculture in Sudan. In recent years, there is a noticeable increase of total investment in the country but mostly targeting the industry and service sector. Investment in agriculture has been dragging behind although there is a continuous/steady increase, Figure (1.1), (1.2).

Figure 1.1



The FDI follows the same trend as general investment in the country. The industry and service sectors lead, but FDI in agriculture overtakes local or national investment considerably.

Figure 1.2



2. Sudan: An Overview of Geography and Agriculture

Sudan, with an area of about one million square miles (2.5 million square kilometres) is the largest country in Africa. It lies between latitudes 30 N and 230 N and longitudes 210 E and 390 E. This country forms an immense basin, sloping gently northwards, with high land on the other three sides – The Red Sea Hills and the Ethiopian high lands on the eastern side, Jebel Marra range on the western side and the Imatong range in the far South.

The dominant physical feature of the country is the Nile system, running through the country for two and a half thousand miles. The White Nile starts in Lake Victoria, enters Sudan through rocky gorges and then flows through the large swampy area of the Sudd region, where it is joined by the Sobat and Bahr Elghazal rivers. The White Nile continues to flow northward till it reaches Khartoum, the capital city, where it joins the Blue Nile coming from Abyssinians High land in Ethiopia. North of Khartoum the river is called the Nile which continues to flow down to the Mediterranean Sea. Besides the permanent River Nile system, there are numerous seasonal affiliates pouring huge amounts of water into the River Nile every year. Chief among these seasonal affiliates are the Rahad, Dindir, Siteet, Tokar and Elgash rivers in East Sudan. These rivers fall from the Abyssinian High Lands in Ethiopia. In the West of the country there is the famous seasonal affiliate - Abu Habil - that flows from the water shed line between Sudan and Congo. The Nile on its way north to Egypt is joined by Attbra River coming from the East. The main contributions to the Nile come from the Blue Nile, Sobat, and Atbara rivers while the White Nile contributes only 30 percent of the Nile's annual average supply of water. This is because the White Nile is interrupted by the Sudud at the Sud Region and flattens into swamps where a considerable amount of water is evaporated.

The Nile system divides the country into a vast table land to the west of the White Nile, while a very fertile region is enclosed in the area between the White Nile and the Blue Nile as well as between River Attbara and the Blue Nile. This is where Sudan's largest gravity irrigated schemes like Gezira, Rahad, Sinnar, Kinana, Elginaid, and the White Nile are located. The capital city Khartoum, is situated at the confluence of the White and Blue Niles and most of the principle towns are clustered on or near the river banks.

The soil is sandy in the northern part of the country, clayey in the central part, and lateritic in the southern part. Out of the country 598 million Feddans, it is estimated that 200 million Feddans are suitable for agricultural production of which 80 million Feddans are range land. It is not so much the availability of land as the availability of water that determines agricultural development possibilities. Besides the wide net of rivers, the amount of rainfall, its reliability and the length of the rainy season increases as we move from the north to the south. Corresponding to this spatial pattern of the rain, the vegetation changes from desert in the north through Acacia desert scrub, Acacia woodland, broad-leaved

savannah, to the tropical rain forest in the south. In view of the spatial mapping of vegetation with the spatial distribution of the rain, the country can be divided into three distinct agricultural zones. (a) From Khartoum latitude northward to the border with Egypt is semi-desert and desert with average annual rainfall ranging from virtually no rain in the extreme north to less than 8 inches (200mm) in the vicinity of Khartoum. Agricultural activity in this zone is only possible with irrigation from the River Nile. (b) The second zone, which covers almost half the country, lies south of the line that roughly joins Geniema with Kassala where average annual rainfall ranges from 8 inches (200mm) in the northern part of the belt to about 30 inches (800mm) in the southern part. Traditional and mechanized rain fed agriculture and animal production are the dominant sources of livelihood. This zone can further be divided geographically into three regions. There are the Kurdufan and Darfur regions where rain is relatively heavy and shifting cultivation is the common agricultural practice. The central region on the other hand where there is sparse and irregular rainfall, necessitates irrigation like the vast Gezira scheme. The eastern region in El Gadarif area where the rain is relatively abundant and the soil is clay, necessitates mechanized farming. The third zone is the southern region where the annual average rain varies from a little over 30 inches (800mm) to over 60 inches (1500mm). This area, which extends over one-sixth of the total area of the country, is suitable for the cultivation of practically all types of tropical crops including tea and coffee.

Livestock is a huge and growing wealth of the nation of Sudan. It grew from 12.5 million heads in 1944 to 40.7 million heads in 1975. Although it is found all over the country, its heavy concentration is in Darfur, Kurdufan, the Blue Nile, Upper Nile, and Bahr Elghazal. In spite of the fact that Sudan possesses 80 million Feddans of grazing land, the poverty reduction role of this huge wealth of animals is minimal because as an asset of the poor it remains economically dead for a number of reasons. Chief among them is the perception among cattle owners that ownership of cattle is a way of life rather than commercial existence. Moreover, the nomadic character of cattle owners, coupled with inadequate infrastructure and services, renders the conversion of the animal wealth into income flows rather impossible. Leaving aside oil, gold, and many other minerals, Sudan is very rich in underground waters. The Nubian Wady and Wady Elmagadam are in fact underground rivers running parallel to the River Nile.

This huge and diversified spatial view of Sudan's natural endowments should not only attract foreign direct investments, but in fact provide a long and diversified menu of investment opportunities for foreign investors to choose from. The vector of profitable agricultural investment undertakings ranges from crop production to animal production, fodder, poultry, organic vegetables, fruits, and even tropical flowers.

3. The Investment Climate in Sudan

The investment climate is perceived as (a) the Investment Law and its evolution, mainly in terms of the privileges and facilitation it offers to the investors and (b) the business climate in terms of the legal, regulatory administrative procedures.

A number of positive changes have helped the perception that Sudan is a suitable country for investment. Apart from the agricultural potential, exploration of oil has given the country a better financial position. The foreign reserves have improved, the exchange rate has become relatively stable and predictable and inflation has come down to a single digit where it remained for quite some time before shooting to 12 percent recently.

In regard to investment, the monetary policies feature the abolition of restrictions on the foreign currency transactions, liberalization of the price systems and floating of the Sudanese currency. There is also a noticeable development in the services, mainly in the field of communication and roads. The energy sector has also improved, namely electricity generation, although a lot needs to be done. On the trade sector, the country has managed to finalize a number of agreements with neighbouring States in the field of bilateral trade and trade protocols. It has also joined COMESA and is preparing to join the WTO. The country has also joined the Arab Free Trade Organization in 2007.

3.1 Investment Legislations

- The regulation of investment on the national level started earlier, in 1956.
- Followed by the issue of the Industrial Investment, Organization and Encouragement Act (1967).
- Industrial Development and Investment Act (1972).
- The Industrial Development and Investment Encouraging Act (1974).
- Regulation and Encouraging of Investment in Economic Services Act (1973).
- Agricultural Development and Investment encouragement Act (1976).
- The Unified investment Act (1980).
- Issue of the Investment Act (1990).
- Investment Encouragement Act (1996).
- Investment Encouragement Act (1999) amended in 2003 & 2009.
- The Labour Act (1997).

The central theme of improvement in all these acts is movement towards more facilitation for investors, removal of contradictions and double taxing, ease of transaction with hard currency, provision of concessions and other encouragement regulatory aspects as outlined below.

3.2 Institutional Setting

- The Investment Act (1999, amended 2007) represents the legal base of regulation and encouragement.
- Each state has rights to issue its own investment act.
- Guarantees against nationalization, confiscation.
- Freedom of transfer of employee's savings.
- Signed 22 bilateral agreements for investment protection and ten are under negotiations.
- Membership in MIGA and Arab Investment Guarantee Assoc.
- Full profit tax exemptions.
- Customs breaks for all capital goods and agricultural inputs.
- Conducive promotion through more concession for FDI in the Agriculture sector.
- Adoption of open and liberal policy on FDI up to 100% ownership in projects which are export-oriented, capital and technology intensive.
- Free repatriation of profits and dividends.
- Liberal exchange policy.
- Liberal employment of key expatriates.
- Allow ownership of agricultural and residential properties.
- In the field of agricultural investment the agricultural revitalization emphasized:
 1. More attention to agricultural investment by improving regulations that enhance investments in agriculture and livestock .
 2. Development of infrastructure and supporting services.
 3. Activation of the role of the private sector.

Given all these positive developments that are allegedly enhancing the investment climate, an outside view provides the following picture about investment climate in the country. Transparency, consistency and efficiency of interactions with national and local governments are important criteria in evaluating the business climate. The Foreign Investment Advisory Service (FIAS), which is a joint facility of the World Bank and the International Finance Corporation, in response to a request by the Ministry of Finance, provided a detailed analysis of administrative barriers to investment in Sudan.

FIAS typically looks at administrative procedures and bottlenecks in the following areas:

- Business registration and licensing;
- Work Permit and visas for foreign investors; managers and technicians;
- Obtaining land for industrial or commercial enterprises;
- Environmental review and approval or project;
- Obtaining utilities connections;
- Registering for and paying taxes;

- Clearing goods through customs.

In spite of all the positive developments mentioned, there is still a lot to be done in order to render the investment climate conducive and more aligned with the best practices adopted internationally as reviewed by FIAS.

According to FIAS (2006)²³, the government of Sudan has made numerous legal and institutional changes over the past several years to promote domestic and foreign investments and economic growth. For example, the Investment Encouragement Act, 1999, amended 2003, and the establishment of a Ministry of Investment (MOI) with its one-stop-shop, is already advancement in investment policies. Legislative and procedural changes have improved the conditions for business. However, much needs to be done where gaps have been identified. Such improvement is important to bring the situation to the best practice levels. The upfront facilitation process is extremely helpful for investors, their main problem lies in the commutative effect of the different procedures during the key stages of running their business. The important gap areas identified by the report were: inconsistencies, lack of clarity, fragmented control, lack of information relating to foreign entry, business start-up (business registration and licensing), site acquisition and development. These amount to a substantial barrier, likely to discourage potential investors. There are also constraints identified in the Joint Assessment Mission report (JAM) and the Comprehensive Peace Agreement (CPA) that must be addressed simultaneously, e.g. infrastructure, skills, etc.

4. The Impact of FDI

This section presents an attempt to describe the impact of FDI in Sudan, based on data from 2000 to 2008 using some estimated behavioural equations. Section 4.1 presents the growth behaviour of Sudan's gross domestic product other than oil, section 4.2 synchronizes the results of section 4.1 with the natural endowments reported, to identify the development potentials of FDI in agriculture in Sudan. Sub-section 4.3 investigates the dynamics of total foreign capital inflow and its allocation among the different sectors in Sudan over the period (2000 - 2008) in order to assess the behaviour of the agricultural share in total foreign capital inflow. Subsections 4.4 to 4.8 are confined to the analysis of foreign direct investment in agriculture in Sudan. In 4.4 results on the size and trends of foreign capital inflows to agriculture by country of origin are presented, and in 4.5 the job creation capacity of foreign direct investment by nationality of FDI is explored. Sub-section 4.6 presents the distribution of FDI agricultural projects by country of origin. In 4.7 the allocation of foreign capital by agricultural activities is described and 4.8 provides a numerical map of FDI locations in the

²³FIAS (Foreign Investment Advisory Service). 2006. Sudan Review of Administrative Barriers to Investment. Consultancy report done for the Ministry of Finance, Sudan.

country. Finally section 4.9 provides a combined numerical map of regional location and activity allocation of foreign capital inflow to agriculture in Sudan.

4.1 The Growth Behaviour of GDP Components Other than Oil

Here we intend to demonstrate the difference between achievements and the potential in order to justify the need for foreign investment. To investigate the sectoral structural change in economic growth between the periods 1986-1995- and 1996-2005-, we estimate the following growth equation:

$$(1) Y_i = e^Z$$

Where $Z = \alpha_0 + \alpha_1 D + \alpha_2 T + \alpha_3 DT + \mu$

$D = 0$ for the observations in the second period (1996-2005)

$D = 1$ for the observations in the first period (1986-1995)

The logarithmic form of (1) is given by:

$$(2) \ln Y_i = \alpha_0 + \alpha_1 D + \alpha_2 T + \alpha_3 DT + \mu_i$$

Now applying model (2) to time series data pertaining to the non-oil components of the GDP, we have produced the results in Table 4.1 below.

Table 4.1 Structural change in Sudan non-oil GDP components (1986 - 2005)

Sectors	(1996 - 2005) G(Y2)	Share (S2)	(1986 - 1995) G(Y1)	Share (S1)	Change in G(Y)	Change in (S)
Agriculture	6	39.9	3	30.2	3	9.7
Irrigated	7	8.2	3	7.5	4	0.7
Mechanized	-1	1.5	1	2.6	-2	-1.1
Traditional	9	6.6	-3	2.4	12	4.2
Livestock	6	20.7	5	11.6	1	9.0
Forestry	1	2.9	2	6.1	-1	-3.2
Industry	13	21.3	4	15.0	9	6.3
Mining & Querying	53	6.2	24	0.1	29	6.1
Manufacturing	5	9.9	3	8.5	2	1.3
Construction	4	2.7	5	4.8	-1	-2.1
Electricity, Water & Gas	9	2.6	7	1.6	2	0.9
Services	3	43.6	5	49.9	-2	-6.3
Gov Services	7	10.5	4	9.4	3	1.0
Other Services	2	33.2	6	40.5	-4	-7.3
GDP	5	100.0	4.8	100	0.2	0.0

Source: own computation based on data from the ministry of Finance and National Economy.

Note:

G(Y2) % = Average annual economic growth rate over the second period (1996 - 2005)

G(Y1)% = Average annual economic growth rate over the first period (1986 - 1995)

(S2) % = Share in GDP over the second period (1996 - 2005)

(S1) % = Share in GDP over the first period (1986 - 1995)

It is important to note that while income from mining, which the poor are not part of, has been growing at an accelerated rate from an average annual growth rate of 24 percent over the first sub-period (1986-1995) to 53 percent over the second sub-period (1996-2005) and its average share in GDP has increased from only 0.1 percent during the first sub-period to 6.2 percent; the average annual growth rate of income from agriculture, has increased from 3 percent over the first sub-period (1986 - 1995) to only 6 percent over the second sub-period (1996-2005). The average agricultural share in GDP has also increased by only 9.7 percentage points between the two sub-periods. Industry, where the rural poor have no share, has also been growing faster than agriculture between the two sub-periods, with average annual growth rate rising from 4 percent over the first sub-period (1986-1995) to 13 percent over the second sub-period (1996-2005) and an average share in GDP rising from 15 percent during the first sub-period to 21.3 percent during the second sub-period.

Most importantly is the growth disparity among agricultural sub-sectors. The results show that the average annual rate of income from irrigated agriculture, where the rural poor are not involved, has accelerated from 3 percent over the first sub-period (1986-1995) to 7 percent over the second sub-period (1996-2005) and its average share in GDP has increased slightly from 7.5 percent during the first sub-period to only 8.2 percent during the second sub-period. Contrarily the mechanized rain fed sub-sector, which supports the poor, has witnessed a dramatic decline in average annual growth rate, falling from 1 percent over the first sub-period (1986 - 1995) to -1 percent over the second sub-period (1996-2005) [i.e. slowing down -2 percentage points]. Its average share in GDP has decreased from 2.6 percent during the first sub-period to 1.5 percent during the second sub-period (1996-2005). While income from traditional rain fed sub-sector has maintained a rising growth trend between the two sub-periods, incomes from forestry and livestock have been declining over the same sub-periods.

It is interesting to note that while income from the whole service sector is declining, with average annual growth rate falling from 5 percent over the first sub-period (1986 - 1995) to 3 percent over the second sub-period (1996 - 2005) and an average share in GDP falling from 49.9 percent during the first sub-period to 43.6 percent during the second sub-period; income from government services sub-sector, where the poor are not involved, has been growing. With an average annual growth rate accelerating from 4 percent over the first sub-period to 7 percent over the second sub-period and an average share in GDP jumping from 9.4 percent during the first sub-period to 10.5 percent during the second sub-period. Similar to the whole service sector, income from the non-government services sub-sector, where the poor are involved, has been declining with

average annual growth rate falling from 6 percent over the first sub-period to only 2 percent over the second sub-period and an average share in GDP falling from 40.5 percent during the first sub-period to 33.2 percent during the second sub-period. The reason why out of a whole declining service sector government service sub-sector has been performing even better than the agricultural sector is that government service sub-sector in fact consists of State-Owned companies that operate in banking, insurance, and telecommunications services sectors.

Thus, synchronizing the story of the huge growth potential reported in the overview with the story of the relatively poor growth performance of non-oil GDP components and its growth disparities among sectors and sub-sectors, we are able to glean two fundamental conclusions. First, actual growth performance of the Sudanese economy, excluding oil, over the period (1986-2005) has been far beyond potential, especially in agriculture. This implies a diversion of investment from soil to oil without reinvesting the returns from oil back into soil. Second, small as it may be, the achieved economic growth is characterized by huge sectoral disparities. Invariably, the growth is not in the economic sectors of the poor implying that the achieved growth, no matter how small, is certainly not pro-poor. As such, income distribution is worsened and income poverty is increased. We shall use these two fundamental conclusions together to justify the need for foreign direct investment in agriculture.

4.2 The Need for FDI in Agriculture in Sudan

The redirection of investment attention from soil to oil and other related sectors without reinvesting the returns from oil back in soil and other related sectors during the last decade has widened the income gap between the urban rich and the rural poor as well as perpetuated economic duality. As a result of this structural change, rain fed agriculture whether mechanized or traditional, is characterized by low and decreasing yield per Feddan and an increasing rate of crop failure as measured by the share of planted (but not harvested) area to total area. A decline in yield eventually means a decline in rural incomes. When rural incomes fall behind food prices (rural poverty), rural people have no way out other than to desert their economically dead agriculture and livestock assets and earn a living in the urban informal sector. This perpetuates economic duality even further. This rural-urban population movement is well exemplified by the results of recent research on population and food in Sudan (Nur, 2009) which show that while the rate of net out-migration from Kurdufan and Darfur has doubled over the last two decades, the rate of net migration to greater Khartoum has tripled over the same two decades and the growth rate of urban population has exceeded the growth rate of total population.

Therefore, in order to unleash the huge potential reported above in section 2, a restructuring the economy in favour of rural areas is needed. This will reduce rural-urban income inequality, reduce rural poverty, suppress the rate of net out rural-urban migration, and make growth pro-poor. Besides the resolution

of regional conflicts, the government should engage in all sorts of activities to attract foreign direct investment to agriculture in Sudan.

Moreover, foreign direct investment in agriculture corrects the internal and external imbalances by broadening the income tax base and increasing export revenues. FDI in agriculture stabilizes food prices because it increases the supply of food. By virtue of increasing both income and the supply of food, FDI sustains food security from the accessibility and availability sides.

Furthermore, if well integrated in the National Poverty Reduction Strategy, appropriately located and allocated where needed most, foreign direct investment in agriculture increases the income of the rural poor, improves income distribution, and consequently, stimulates production in other sectors through increasing aggregate demand in the economy. Besides its contribution to development and poverty reduction, foreign direct investment in agriculture improves international relations and aborts unnecessary political tensions between nations. Foreign direct investment in agriculture is also needed because it brings the best practices that can be imitated by the nationals and transfers appropriate technology to the subsistence sector.

4.3 Sectoral Allocation of Total Foreign Capital in Sudan (2000 - 2008)

In this section we try to investigate the dynamics of total foreign capital inflow and its allocation among the different sectors in Sudan over the period (2000-2008) in order to see the behaviour of the agricultural share in total foreign capital inflow. Because the available time series data is only for nine years, the methodology used involves the estimation of a growth equation for the total foreign capital inflow and its sectoral allocations over the whole period. We then split the period into two sub-periods to see the changes in the pattern of foreign capital allocation among sectors. The results are reported in Table (4.2) and depicted in Figure (4.1).

Table 4.2 Inflow of total foreign direct capital by sector in Sudan (2000 - 2008)

Period	Indicator	Agriculture	Industry	Service	Total
2000 - 2008	Total in million US\$	1045.8	45885.8	9561.6	56493.2
	Annual Growth Rate (%)	23	4	26	5
	Average in million US\$	157.1	5098.4	1062.4	6317.9
	Share in Grand Total (%)	2	81	17	100
2000 - 2004	Total in million US\$	379.82	39291.38	2240.17	41911.37
	Average in million US\$	77.5	7858.3	448.0	8383.8
	Share in Grand Total (%)	1	94	5	100
2005 - 2008	Total in million US\$	666.00	6594.42	7321.42	14581.84
	Average in million US\$	256.5	1648.6	1830.4	3735.4
	Share in Grand Total (%)	7	44	49	100
Change in Total		286.17	-32696.9	5081.24	-27329.54
Change in Average (million US\$)		178.9	-6209.7	1382.3	-4648.4
Change in Share (percentage points)		6	-50	44	0.0

Source: Own computation based on the ministry of investment data

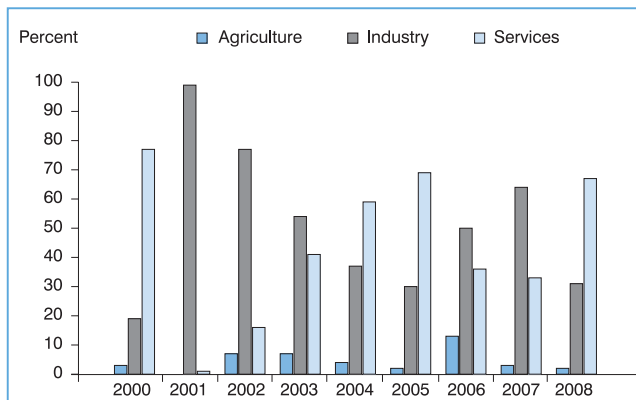
The results show that foreign direct capital investment has been flowing into Sudan at an annual average growth rate of 5 percent and an annual average of US \$6317.9 million over the period (2000 - 2008). This would imply that the investment climate in Sudan is conducive in a sustainable way over the period of the study. Nevertheless, total foreign capital is not allocated evenly among sectors. For example, the share of agriculture in total foreign capital is only 2 percent, and it has been growing at an average annual rate of 23 percent. This implies that there is a growing foreign interest in investing in agriculture in Sudan. The share of industry (oil) in total foreign is 81 percent but that high share has been accumulating annually at a steady average annual growth rate of 4 percent. The share of the service sector (mainly communication, transportation, and marketing) in total foreign capital is 17 percent and that high share has been annually accumulating at an increasing average annual growth rate of 26 percent implying that, similar to agriculture, foreign interest in the service sector is also growing.

The dynamics of total foreign capital and its sectoral allocation can be demonstrated by the changes that took place between the first sub-period (2000-2004) and the second sub-period (2005-2008). It is interesting to note from Table (2) that while total foreign capital has decreased from US \$41911.4 million to US \$14581.8 million (a reduction of about US \$27329.5 million), the allocation of foreign capital to agriculture and service has increased approximately US \$286.2 million and US \$5081.2 million respectively. The reduction in total foreign capital between the two sub-periods can be explained by the huge reduction in the allocation of foreign capital to industry from US \$39291.4 million at the end of the first period to US \$6594.4 million at the end of the second period (a reduction of about 32697 millions US\$). The huge reduction in the allocation of foreign

capital to industry is understandable because the surge of foreign capital to the production of oil has gradually slowed down. It may pick up again if Sudanese political climate becomes conducive for western oil companies to come in. If this happens, the allocation of foreign capital to industry will suddenly jump and that should not overshadow the rising trends of foreign capital allocation to agriculture and service. What is important for pro-poor growth is that both agriculture and service continue gaining momentum vis-à-vis foreign direct investment.

The results in Table (4.2) show that while the shares of agriculture and service in total foreign capital have increased from 1 percent to 7 percent and from 5 percent to 49 percent (an increase of about 44 percentage points) respectively, the share of industry in total foreign capital has decreased from 94 percent to 44 percent. It should be noted that the difference in change between agriculture and service compared to that of industry is not a substitution effect because the investors are not the same. It is a difference in independent trends in the sense that, while the shares of agriculture and service exhibit rising trends that of industry exhibits a declining trend. This will be visually clear when the numerical picture in Table (4.2) is depicted in Figure (4.1) below.

Figure 4.1 Sectoral percentage shares in total foreign capital (2000 - 2008)



Source: Own computation based on data from the Ministry of Investment (Khartoum)

It is clear from Figure (4.1) that the share of industry in total foreign capital varied over the study period.

The share of agriculture in total foreign capital remains relatively small and fluctuating over the period. One possible explanation of the sharp fluctuation that characterized the share of agriculture in total foreign capital is a changing degree of risk aversion among foreign investors in the sense that potential foreign investors are waiting to know the investment outcomes of those who are already in business. Under a politically fluctuating situation it is only natural for those who avert risk to behave like that especially in agriculture.

We quickly note that share of service in total foreign capital is less fluctuating than that of agriculture because the former is less risky than the latter.

4.4 The Nationalities of Foreign Capital Inflow to Agriculture in Sudan (2000 - 2008)

Without intending to raise any ethnicity issues, and for mere simplicity purposes, we group the nationalities of foreign capital inflow to agriculture in Sudan into Arab and non-Arab. The Arabs by order of foreign direct investment in agriculture in Sudan include Saudi Arabia, United Arab Emirates, Egypt, Syria, Palestine, Libya, Yemen, Kuwait, Jordan, and Qatar. Similarly, the non-Arabs by order of foreign direct investment in agriculture in Sudan include China, India, Italy, The Netherlands, and Britain. While the Arab countries together have 84 percent of total foreign direct investment agricultural projects in Sudan, the Asian countries and the European countries have 7 percent and 9 percent respectively. Applying the same methodology of estimating a growth equation for the whole period and splitting the period into first sub-period (2000-2004) and second sub-period (2005 - 2008), the results are reported in Table 4.3 below.

Table 4.3 Inflow of FDI capital in Sudan by nationality (2000 - 2008)

Period	Indicator	Arabs	Non-Arabs	Total
2000 - 2008	Total in million US\$	955.35	90.47	1045.82
	Annual Growth Rate (%)	9	8	9
	Average in million US\$	106.15	10.05	116.20
	Share in Grand Total (%)	91.3	8.7	100
2000 - 2004	Total in million US\$	338.75	41.07	379.82
	Average in million US\$	67.75	8.21	75.96
	Share in Grand Total (%)	89.2	10.8	100
2005 - 2008	Total in million US\$	616.60	49.40	666.00
	Average in million US\$	154.15	12.35	166.50
	Share in Grand Total (%)	92.6	7.4	100
Change in Total		277.85	8.33	286.17
Change in Average (million US\$)		86.4	4.1	90.5
Change in Share (percentage points)		3	-3	0

Source: Own computation based on the ministry of investment data

It is clear from Table (4.3) that Arabs have a strong and growing agricultural investment presence in Sudan. Over the nine year period (2000-2008-) Arabs invested US \$955.35 million which represents 91.3 percent of total foreign direct capital investment in agriculture in Sudan over the same period. Arab agricultural capital investment in Sudan has been growing at an average annual growth rate of about 9 percent. On the other hand non-Arabs as a group invested only US \$90.47 million over the same period (2000 - 2008) which represents only 8.7 percent of total foreign total direct investment in agriculture in Sudan. Non-

Arab capital investment in agriculture in Sudan has been growing at an average annual growth rate of about 8 percent. The coexistence of a small total share of about 8.7 percent relative to a high growth rate of 8 percent is because the small annual inflow of non-Arab capital has started to increase over the second half of the period.

The results show that total foreign direct capital investment in agriculture increased from US \$379.82 million to US \$666 million by the end of the second period (US \$286.18 millions). While Arab capital inflow to agriculture in Sudan increased by US \$277.25 million, non-Arab capital inflow to agriculture in Sudan increased by only US \$8.33 million. Thus, most of the increase in total foreign capital inflow to agriculture in Sudan between the two sub-periods came from Arab investments. This is why the Arab share in total foreign capital inflow to agriculture in Sudan increased by 3.4 percentage points, but the non-Arabs share decreased by 3.4 percentage points.

4.5 Job Creation, Capital Intensity and Projects by Nationality of FDI in Sudan (2000 - 2008)

The essence of FDI, vis-à-vis development in a resource rich country like Sudan where development is characterized by high rates of unemployment, widespread poverty, huge income and regional disparities; is of three dimensions: job creation, income raising, and removal of income and regional inequality, with an ultimate goal of poverty reduction. The realization of the three development dimensions of FDI necessarily call for careful coordination between planning and investment authorities regarding the regional location of FDI and the choice of production techniques. In the absence of such careful coordination, (Sudan is a case in point), none of the three FDI development dimensions will be realized because foreign direct investors, guided by the principle of profit maximization, may feel free to locate their investment in urban areas overlooking the already deprived rural areas. Further they may choose capital intensive production techniques ignoring the issue of job creation and subsequently the issue of poverty reduction.

In this section we try to investigate how FDI job creation capacity in Sudan is closely related to the chosen production technique and whether the FDI choice of production technique is related to FDI nationality. This may help the host country set a nationality policy, to invite FDI from with selected nationalities. Applying the same methodology of estimating a growth equation over the whole period (2000-2008) and splitting the whole period into first sub-period (2000-2004) and second sub-period (2005-2008), the results on FDI job creation and the choice of production technique by FDI nationality in Sudan (2000-2008) are reported in Table (4.4) below.

Table 4.4 Jobs and K/L intensity by nationality of FDI in Sudan (2000 - 2008)

Period	Indicator	Arabs	Non-Arabs	Total
(2000 - 2008)	Annual Average	511	221	732
	Share in Total (%)	69.8	30.2	100
	Annual Growth Rate (%)	10	47	20
	K/L Intensity	0.21	0.05	0.16
(2000 - 2004)	Annual Average	442	42	483
	Share in Total (%)	91	9	100
	K/L Intensity	0.20	0.15	0.16
(2005 - 2008)	Annual Average	597	445	1042
	Share in Total (%)	57	43	100
	K/L Intensity	0.26	0.03	0.16
Change in Average (jobs)		155	403	558
Change in Share (percentage points)		-34	34	0
Change in K/L Intensity		0.06	-0.12	0

Source: Own computation based on the ministry of investment data

Synchronizing the results in Table (4.3) with the results in Table (4.4) total foreign direct investment in agriculture in Sudan over the whole period (2000-2008) amounted to US \$1045.82 million. A sum of US \$955.35 million came from Arab investments and the remaining sum of 90.47 from the non-Arab. The results also show that total number of jobs created by total FDI in agriculture in Sudan over the whole period amounted to 6584 jobs, while 4596 jobs are due to Arab investments, the remaining 1988 jobs are due to non-Arab investments.

The Arab direct capital investment in agriculture in Sudan which represents 91.3 percent of total foreign direct capital investment in agriculture in Sudan, created only 69.8 percent of total FDI jobs in agriculture in Sudan. Contrarily the non-Arabs direct capital investment in agriculture in Sudan which represents only 8.7 percent of the total foreign direct capital investment in agriculture in Sudan created 30.2 percent of total FDI jobs in agriculture in Sudan. This means, relative to their amounts of invested capital, the non-Arab FDI in agriculture in Sudan created more jobs than the Arab FDI in agriculture. The reason behind the relative difference in job creation between the Arab and non-Arab FDI in agriculture is the difference in the choice of production technique. In this research the choice of production technique is measured by the capital/labour intensity denoted by K/L. In theory K/L varies between zero and infinity standing for the extreme situations of no capital, and no labour production techniques. While the Arab FDI adopted a relatively more capital intensive production technique as measured by $K/L = 0.21$ which means that the creation of one job requires an investment of US \$0.21 million; the non-Arab FDI adopted a relatively less capital intensive production technique as measured by $K/L = 0.05$ which means that the creation of one job requires only US \$0.05 million. This why relative to the amount of invested capital the non-Arab FDI in agriculture in Sudan created more jobs than the Arab FDI.

The Arab FDI could have created 14511 more jobs and increased the total FDI jobs from 6584 to 21095, if it adopted the Non-Arab technique of production ($K/L = 0.05$). If this had happened, then the Arab FDI share in total FDI job creation would have jumped to 90.6 percent which is quite consistent with its 91.3 percent share in total FDI capital investment. The non-Arab share in total FDI job creation would have declined to 9.4 percent which is also quite consistent with its 8.7 percent share in total FDI invested capital. In order to maximize the job creation dimension of FDI in agriculture, the investment authority in Sudan should either ask the Arab investors to adopt a less capital intensive production technique ($K/L < 0.21$), should shift FDI hosting in favour of the non-Arab investors, or combine the two policies.

Furthermore, the results in Table (4) show that while the Arab FDI share in total FDI job creation has decreased from 91 percent to 57 percent because its capital/labour intensity (K/L) has increased from 0.2 to 0.26, the Non-Arab FDI share in total FDI job creation has increased from 9 percent to 43 percent because its capital/labour intensity (K/L) has decreased from 0.05 to 0.03. Therefore, the Arab FDI in agriculture continued to increase capital intensity and create relatively fewer jobs, while the non-Arab FDI in agriculture continued to decrease capital intensity and create relatively more jobs.

We now try to investigate the allocation of foreign direct investment agricultural projects between Arab and Non-Arab investors in Sudan over the period (2000-2008). Using the same methodology of estimating a growth equation over the whole period (2000-2008) and split the period into first sub-period (2000-2004) and second sub-period (2005 - 2008), the results are reported in Table (4.5) below.

Table 4.5 Inflow of FDI projects in Sudan by nationality (2000 - 2008)

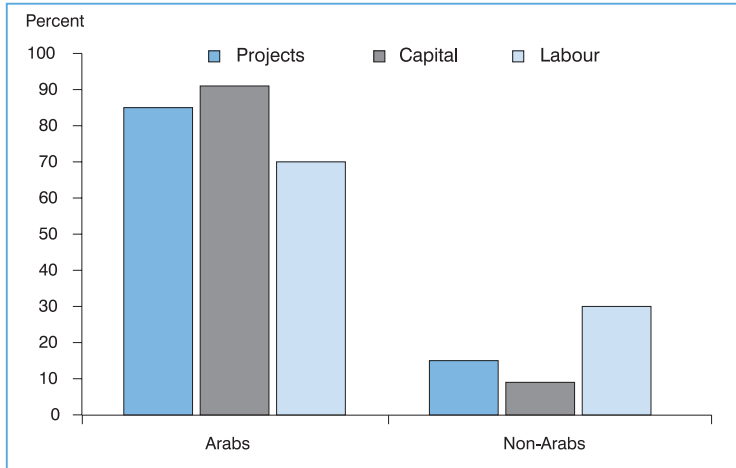
Period	Indicator	Arabs	Non-Arabs	Total
(2000 - 2008)	Number of projects	75	13	88
	Annual Average	8.33	1.44	9.78
	Share in Total (%)	85.2	14.8	100
	Annual Growth Rate (%)	8	7	10
(2000 - 2004)	Number of projects	40	6	46
	Annual Average	8	1.2	9.2
	Share in Total (%)	87	13	100
(2005 - 2008)	Number of projects	35	7	42
	Annual Average	8.75	1.75	10.5
	Share in Total (%)	83.3	16.7	100
Change in Number of projects		-5	1	-4
Change in Average (projects)		83.3	0.55	1.30
Change in Share (percentage points)		-3.6	3.6	0

Source: Own computation based on the ministry of investment data

The results in Table (4.5) also show that while the Arab FDI share in the total number of agricultural projects in Sudan has decreased from 87 percent to 83.3

percent, the non-Arab share has increased from 13 percent to 16.7 percent. Finally, the Arab and non-Arab shares in the three components of FDI in agriculture in Sudan; namely, number of projects, invested capital, and jobs created, are depicted in Figure (4.2) below.

Figure 4.2 Arab and non-Arab shares in the three components of FDI in Sudan



Source: Own computation based on data from the Ministry of Investment, (Khartoum)

Figure (4.2) shows that the share of Arab FDI in job creation (70%) is small relative to its high share in FDI capital (91%) and in FDI projects (85%). The share of the non-Arab FDI in job creation (30%) is high relative to its small share in FDI capital (9%) and in FDI projects (15%). This is mainly because the Arab FDI in agriculture in Sudan is more capital intensive ($K/L = 0.21$) than the non-Arab FDI.

4.6 FDI in Agriculture by Sub-sector in Sudan (2000 - 2008)

In this section we intend to provide quantitative knowledge about the allocation of total FDI across agricultural sub-sectors in order to monitor the direction of FDI towards national goals of food security, poverty reduction, population movements, and removal of income inequality. Such early monitoring will help investment authorities redirect FDI in agriculture towards the sub-sectors that serve the national goals. The results are reported in Table (4.6) below and depicted in Figure (4.3).

Table 4.6 Total FDI in agriculture by sub-sector in Sudan (2000 - 2008)

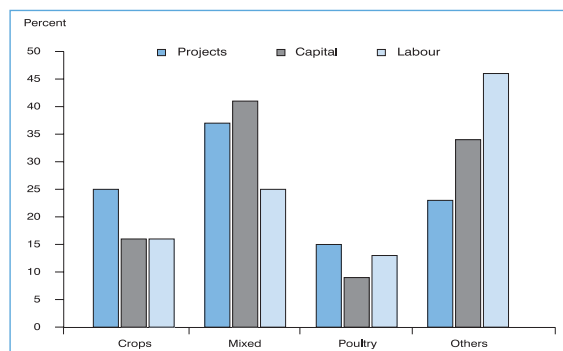
Sub-sector		Projects	Capital	Labour	K/L intensity
Crops	Units	22	168.74	1052	0.16
	Share (%)	25	16	16	-
Mixed Farming	Units	33	426.73	1682	0.25
	Share (%)	37	41	25	-
Poultry	Units	13	92.28	83	0.11
	Share (%)	15	9	13	-
Others	Units	20	358.07	3014	0.12
	Share (%)	23	34	46	-
Total		88	1045.82	6584	0.16

Source: Own computation based on data from the Ministry of Investment Khartoum)

Note: Projects are in number, Capital is in million US\$, Labour is in persons

Others include marketing, distribution, and other agricultural services.

The results in Table (4.6) show that though 37 percent of the total FDI projects and 41 percent of total FDI capital are in mixed farming, only 25 percent of total FDI jobs are created by this sub-sector because of the high capital intensive production technique ($K/L = 0.25$). Poultry which uses the least capital intensive production technique ($K/L = 0.11$) constitutes 15 percent of total FDI projects, has only 9 percent of total FDI capital, and has created 13 percent of total FDI jobs. Crop production, in spite of its huge potential for pro-poor growth and food security, accounted for only 25 percent of total FDI agricultural projects, allocated only 16 percent of total FDI capital and created only 16 percent of total FDI jobs because it uses a relatively more capital intensive production technique ($K/L = 0.16$). The major share of total FDI created jobs is found in other FDI agricultural activities which include agricultural marketing and distribution. This sub-sector, though it constitutes only 23 percent of total FDI projects and is allocated only 34 percent of total FDI capital, has created 46 percent of total FDI jobs because it uses the least capital intensive production technique ($K/L = 0.12$). If the least capital intensive production technique used in the poultry sub-sector ($K/L = 0.11$) is applied in other sub-sectors, FDI in mixed farming, crops production, and other agricultural activities, would have respectively increased employment in agriculture by 2197, 482, and 241 jobs and total FDI job creation would have increased by 2921. The results in Table (4.6) are depicted in Figure (4.3) below.

Figure 4.3 Sub-sectors shares of total FDI in agriculture in Sudan

Source: Own computation based on data from the Ministry of Investment (Khartoum)

4.7 FDI Behaviour by sub- Sector in Sudan (2000 - 2008)

In this section we shall investigate the behaviour of the three FDI components; namely, number of FDI projects, size of FDI capital, and FDI created jobs in each sub-sector. This will reveal investor's preferences vis-à-vis agricultural sub-sectors in Sudan and judge if investor's preferences are compatible with the national development objectives of FDI in Sudan. We stick to the same methodology of estimating a growth equation for the three FDI components over the whole period (2000-2008) and then split the period into first sub-period (2000-2004) and second sub-period (2005-2008) in order to trace the changes in averages and shares over the two sub-periods. Starting with the mixed farming sub-sector, the results are reported in Table (4.7) below.

Table 4.7 Foreign direct investment in mixed farming in Sudan (2000 - 2008)

Period	Indicator	Projects	Capital	Labour	Capital/Labour Intensity
2000 - 2008	Total	33	426.73	1682	0.25
	Annual Growth Rate (%)	14	28	42	-
	Share in Grand Total (%)	37.5	40.8	25.5	-
	Average	3.7	47.41	187	0.25
2000 - 2004	Total	13	50.96	381	0.13
	Share in Grand Total (%)	28.3	13.2	15.8	-
	Average	2.6	8.99	76	0.13
2005 - 2008	Total	20	381.77	1301	0.29
	Share in Grand Total (%)	47.6	57.3	31.2	-
	Average	5	95.44	325.25	0.29
Change in Total		7	330.81	920	0.16
Change in Share		19.4	44.1	15.5	-
Change in Average		2.4	86.45	249	0.16

Source: Own computation based on data from the ministry of investment (Khartoum 2009)

Note: Projects are in number, Capital is million US\$, Labour is in persons

The results in Table (4.7) show that over the last nine years FDI in agriculture in Sudan financed 33 mixed farms with a sum of US \$426.73 million. These aggregates have been growing at average annual rates of 14 percent and 28 percent respectively over the period (2000 - 2008). Given a total capital/labour intensity (K/L) of about 0.25, FDI in mixed farming has created a total of 1682 jobs which has been growing at an average annual growth rate of about 42 percent. In terms of shares, the three components (projects, capital, and labour) of FDI in mixed farming represent 37.5 percent, 40.8 percent, and 25.5 percent of the corresponding total FDI components in agriculture in Sudan.

The results also show that the propensity of foreign investors to invest in mixed farming increased in absolute and relative terms during the second sub-period. Moreover, FDI components in mixed farming as shares of their corresponding components of total FDI in agriculture increased from 28.3, 13.2, and 15.8 percent at the end of the first sub-period to 47.6, 57.3, and 31.2 percent at the end of the second sub-period respectively.

Most important for FDI policy making is the significant increase of the capital/labour intensity (K/L) in FDI mixed farms from 0.13 to 0.29. This means that the creation of one job in FDI mixed farming requires a foreign investment of US \$0.29 million in mixed farming in Sudan. Thus, unaware of such highly capital intensive production technique in mixed farming, FDI authorities in Sudan continued to host more FDI in mix farming during the second sub-period. However, more inflow of FDI that uses a capital intensive production technique will jeopardize the national employment and poverty reduction objectives of FDI. Therefore, in order to achieve these goals, FDI authorities in Sudan should encourage the type of FDI in agriculture that employs more labour relative to capital. Without such selective policy, FDI in agriculture, unemployment and poverty in Sudan will grow apart.

The results in Table (4.8) show that over the whole period (2000-2008) FDI in agriculture in Sudan financed only 13 poultry projects with a sum of US \$92.28 million. These aggregates have been growing at average annual rates of 0.4 percent and 4 percent respectively over the period (2000 - 2008). Given a small aggregate capital/ labour intensity (K/L) of about 0.11, FDI in poultry has created a total of 836 jobs which has been decreasing at an average annual growth rate of about -2 percent. In terms of shares, the three components (projects, capital, and labour) of FDI poultry represent 14.8 percent, 8.8 percent, and 12.7 percent of the corresponding total FDI components in agriculture in Sudan.

Table 4.8 Foreign direct investment in poultry in Sudan (2000 - 2008)

Period	Indicator	Projects	Capital	Labour	Capital/Labour Intensity
2000 - 2008	Total	13	92.28	836	0.11
	Annual Growth Rate (%)	0.4	4	-2	-
	Share in Grand Total (%)	14.8	8.8	12.7	-
	Average	1.4	10.25	93	0.11
2000 - 2004	Total	9	55.83	591	0.09
	Share in Grand Total (%)	19.6	14.5	24.5	-
	Average	1.8	11.17	118	0.09
2005 - 2008	Total	4	36.45	245	0.15
	Share in Grand Total (%)	9.5	5.5	5.9	-
	Average	1	9.11	61	0.15
Change in Total		-5	-19.38	-346	0.05
Change in Share		-10.0	-9.0	-18.6	-
Change in Average		-0.8	-2.05	-56.95	0.05

Source: Own computation based on data from the ministry of investment (Khartoum 2009)

Note: Projects are in number, Capital is million US\$, Labour is in persons

The results in Table (4.8) also show that, contrary to FDI in mixed farming, FDI in poultry has gradually lost momentum in both absolute and relative terms over the second sub-period. But the capital/labour intensity (K/L) increased from 0.09 at the end of the first sub-period to 0.15 at the end of the second sub-period. Finally, as a result of the combined effect of a reduction in capital and an increase in capital/labour (K/L), employment in the FDI poultry industry in Sudan has been significantly reduced from 591 jobs to 245 jobs (a 59 percent reduction).

Moreover, FDI components (number of projects, invested capital, and labour) in the poultry industry, as shares of their corresponding components of total FDI in agriculture in Sudan decreased from 19.6, 14.5, and 24.5 percent at the end of the first sub-period to 9.5, 5.5, and 5.9 percent at the end of the second sub-period respectively. One possible explanation of the sharp decline in foreign direct investment in poultry in Sudan over the second sub-period is the small size of the local market for poultry and poultry products because they are primarily urban foods.

The results in Table (4.9) show that total foreign direct capital inflow to the whole crop production sub-sector in Sudan over the period (2000-2008) was only US \$168.74 million which is US \$258 million less than total foreign capital invested in mixed farming. The total number of jobs created by FDI in crop production was only 1052 jobs which are 630 jobs less than those created in mixed farming. Another point of difference between FDI in crop production and FDI in mixed farming is that the former used a less capital intensive production technique than the latter by 0.09 (K/L). This implies that if crop production, being the largest

agricultural practice in the country, is treated like mixed farming in terms of foreign capital investment, it would have created 2867 more jobs. This is how misallocation of foreign direct investment among agricultural activities may cause real economic losses that could have been avoided.

Table 4.9 Foreign direct investment in crop production in Sudan (2000 - 2008)

Period	Indicator	Projects	Capital	Labour	Capital/Labour Intensity
2000 - 2008	Total	22	168.74	1052	0.16
	Annual Growth Rate (%)	-4	1	-13	-
	Share in Grand Total (%)	25	16.1	16.0	-
	Average	2.4	18.75	117	0.16
2000 - 2004	Total	12	45.72	505	0.09
	Share in Grand Total (%)	26.1	11.8	20.9	-
	Average	2.4	9.14	101	0.09
2005 - 2008	Total	10	123.02	547	0.22
	Share in Grand Total (%)	23.8	18.5	13.1	-
	Average	2.5	30.76	137	0.22
Change in Total		-2	77.31	42	0.13
Change in Share		-2.3	6.6	-7.8	-
Change in Average		0.1	21.61	35.75	0.13

Source: Own computation based on data from the ministry of investment (Khartoum 2009)

Note: Projects are in number, Capital is million US\$, Labour is in persons

The results also show that the number of FDI crop production projects, the sum of foreign capital allocated to crop production, and the number of jobs created by FDI in crop production are only 25 percent, 16.1 percent, and 16 percent of total FDI in agriculture in Sudan respectively. These small FDI shares for the largest agricultural sub-sector in Sudan which is a major source of livelihood for millions of people in rural areas, is another indication of the misallocation of FDI within agriculture in Sudan. Moreover, the three components of FDI in crop production (number of projects, sum of foreign capital, and employment) small as they may be are declining over time. In contrast, the same FDI components in mixed farming have been growing at average annual growth rates of about 14 percent, 28 percent and 42 percent respectively. This is also indicative of the misallocation of FDI within agriculture in Sudan.

Moreover the results show that while the FDI projects in crop production decreased, their shares in total FDI projects in agriculture in Sudan also decreased. The sum of FDI capital in crop production increased in both absolute and relative terms between the two sub-periods and its share in total FDI capital in agriculture increased as well. Nevertheless the share of FDI employment in crop production in total FDI employment in agriculture decreased simply because the increase in the FDI capital in crop production was associated with an increase in capital/labour intensity (K/L).

4.8 Foreign Direct Investment in Agriculture: Regional Locations in Sudan.

This is another checking point where the impact of FDI in agriculture on growth and distribution is viewed through the realization of vertical equity in a country that is characterized by huge regional inequality. The principle of vertical equity says, “unequal situations should be treated unequally”. This principle implies that deprived regions should be given high weights in regional allocation of FDI in Sudan. In more technical terms, the principle of vertical equity implies a negative unity rank correlation coefficient between the levels of regional deprivation and the size of regional FDI. Whether vertical equity in the regional location of FDI in Sudan is realized or not can be judged by the results in Table (4.10) below.

Table 4.10 Total agricultural FDI by regional location in Sudan (2000 - 2008)

Regions	Projects	Capital	Labour	K/L Intensity
Northern	8 (9.1)	177.01 (16.9)	411 (6.2)	0.43
Eastern	4 (4.5)	3.04 (0.3)	93 (1.4)	0.03
Khartoum	57 (64.8)	481.93 (46.1)	3541 (53.8)	0.14
Central	6 (6.8)	245.22 (23.4)	252 (3.8)	0.97
Western	2 (2.3)	0.62 (0.1)	167 (2.5)	0.004
Southern	2 (2.3)	7.5 (0.7)	55 (0.8)	0.14
Pan-States	9 (10.2)	130.49 (12.5)	2080 (31.6)	0.14
All	88 (100)	1045.82 (100)	6584 (100)	0.06

Source: Own computation based on data from the Ministry of Investment (Khartoum)

Note: Projects are in number, Capital is million US\$, Labour is in persons

Figures between brackets are percentage shares of total.

Pan-States are FDI projects that operate in more than one State.

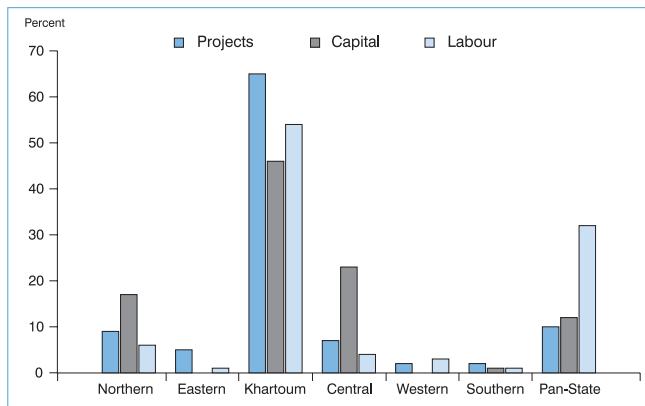
The striking feature of the results in Table (4.10) is the regional disparity in the FDI choice of production technique, where capital/labour intensity (K/L) varies from 0.004 in the Western region to 0.97 in the Central region. Another striking feature of the results in Table (4.10) is that as far as the national employment objective is concerned FDI choice of production technique and FDI capital allocation are in reverse order. For example, in the Western region where FDI employment

potential is very high because capital intensity is very low ($K/L = 0.004$) the allocated amount of FDI capital was only US \$0.62 million. On the other hand, in the Central region where FDI employment potential is relatively very low because capital intensity is very high ($K/L = 0.97$, almost 243 times that in the Western region), the allocated amount of FDI capital was US \$245.22 million (almost 396 times that in the Western region). If FDI capital allocation to the Western region was equal to FDI capital allocation to the Central region (US \$245.22 million), keeping capital intensities intact, the Western region would have created 61305 jobs instead of only 167 jobs. Consequently, Sudan would have made a net employment gain of about 61138 jobs in the Western region and hence achieved regional equity. It seems that foreign investors are free to locate FDI projects, decide the amount of capital to be invested, and choose the level of capital intensity that maximizes their profits. If this prediction is true then FDI projects in agriculture in Sudan, though home grown, are not nationally owned.

It is clear from Table (4.10) that the regional location of FDI is exactly against the principle of vertical equity. This is because 86.4 percent of total FDI capital in agriculture in Sudan is allocated to the three most developed regions in the country; namely Khartoum, the Northern, and the Central regions, depriving the least developed regions; namely, the Western, the Eastern, and the southern regions of FDI. Khartoum region which is the most developed region in the country attracted 46.1 percent of total FDI in agriculture in Sudan. Thus, in the absence of a regional development plan where FDI should have been carefully integrated, FDI in agriculture in Sudan have perpetuated regional disparities instead of reducing them.

Finally, the percentage regional shares in FDI components are depicted by Figure (4.4) below.

Figure 4.4 Regional percentage shares in total FDI components in Sudan



Source: Own computation based on data from the Ministry of Investment (Khartoum)

Here we intend to sketch a numerical map of the agricultural sub-sector allocation of foreign direct capital investment in order to assess its compatibility with the map of natural endowments in Sudan. The main purpose of this exercise is to provide empirical evidence in support, or otherwise, of the concurrency of the FDI agricultural map with the natural endowment map. The results of this exercise are reported in Table (4.11) below:

Table 4.11 Total FDI capital by region and activities

Regions	Crops	Mixed Farming	Poultry	Others	Total
Northern	128.02 (76)	48.99 (11)	0 (0)	0 (0)	177.01 (17)
Eastern	0.94 (1)	2.10 (1)	0 (0)	0 (0)	3.04 (0)
Khartoum	29.16 (17)	322.10 (76)	92.2 (100)	38.39 (11)	481.93 (46)
Central	0 (0)	49.72 (11)	0 (0)	195.50 (55)	245.22 (23)
Western	0.27 (0)	0.35 (0)	0 (0)	0 (0)	0.62 (0)
Southern	5.00 (3)	2.50 (1)	0 (0)	0 (0)	7.50 (1)
Pan-States	5.35 (3)	0.97 (0)	0 (0)	124.17 (35)	130.49 (13)
All	168.74 (100)	426.73 (100)	92.28 (100)	358.07 (100)	045.82 (100)

Source: Own computation based on data from the Ministry of Investment (Khartoum)

Note: Figures between brackets are percentage shares of total, Capital is million US\$, Pan-States are FDI projects that operate in more than one State

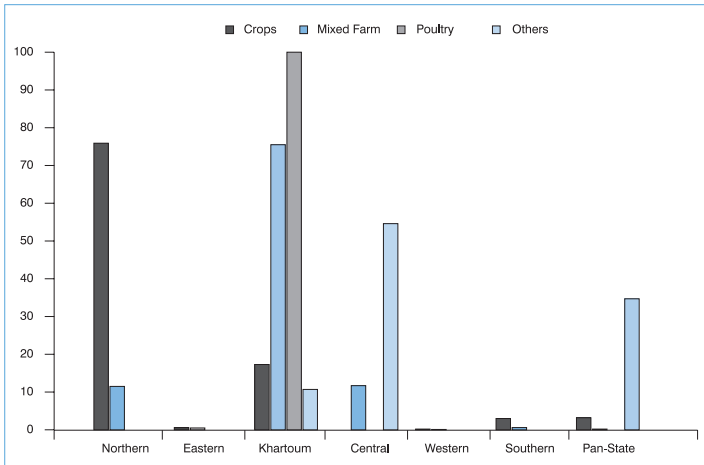
In addition to the reinforcement of regional disparities caused by poor regional location of FDI in agriculture in Sudan, the results in Table (4.11) show the spatial distribution of FDI capital allocation among agricultural activities is not concurrent with the habitats of agricultural resources in Sudan. For example, while the Eastern, the Central, and the Western regions which are the major natural homes of crops have only 1 percent of total FDI capital allocated to crop production, Khartoum, which is mainly a human habitat and the historical home for governments, has 17 percent of total FDI capital allocated to crop production. The Northern region which is the major natural home for dates, vegetables, legumes, and fruits, have 76 percent of total FDI capital allocated to crops production.

Moreover, the results in Table (4.11) show that the Western and the Southern regions, although they are the major animal habitats, together have only 1 percent of total FDI capital allocated to mixed farming. The irony is that Khartoum, the

Northern, and the Central regions, which are not animal habitats, together have 98 percent of total FDI capital allocated to mixed farming. On the other hand, the 8.8 percent of total FDI capital in agriculture in Sudan which is allocated to the poultry industry is exclusively located in Khartoum. The development implication of this dichotomy between the location of the allocated FDI capital to agricultural activities and the habitats of animals and plants in Sudan, is that the natural assets of the poor will remain economically dead and consequently rural poverty and FDI in agriculture in Sudan will grow apart. It is the investment authorities in Sudan and not the foreign investors who should be blamed for this because the national map of foreign direct investment facilitation in Sudan is not concurrent with the habitats of animals and plants.

The regional location of percentage shares of the different agricultural activities in total FDI in agriculture in Sudan are depicted in Figure (4.5) below.

Figure 4.5 FDI Capital in agriculture by regions and activities



5. Conclusions

Development in Sudan is characterized by huge regional inequalities and therefore, investment facilities, particularly basic infrastructure, roads, communication, and local markets, are not evenly located in the country. Foreign investors for obvious reasons, prefer to locate their projects where investment facilities are available. This is the investment logic behind the concentration of FDI agricultural projects in the most developed regions of Khartoum, the River Nile, and Gezira. However, if these regional biases of FDI in Sudan continue unchecked, regional inequalities and consequently regional conflicts will perpetuate. Thus, sleepwalking over this clash between foreign investors interests and the national objective of achieving equitable regional sharing of development, may soon lead to a tragedy of the commons as foreign investors, fearful of the spread of regional conflicts may slow down the speed of foreign capital inflows.

In order to avoid an anticipated tragedy of the commons, the government should activate the development functions of the existing Federal System of Governance and enhance the process of the regional equitable sharing of resources and wealth as placed in the Comprehensive Peace Agreement (CPA) and the interim national constitution of Sudan.

