EU policy coherence: the Common Agricultural Policy and Development

A case study about Morocco

CAROLINE LEMERLE

Promoter: Prof. dr. Xavier Gellynck

Master's dissertation submitted in partial fulfillment of the requirements for the degree of Master of Science in Nutrition and Rural Development, main subject: Rural Economics and Management
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Abstract

This paper analyses the effects of agricultural liberalisation between Morocco and the EU with a focus on the Moroccan tomato chain as a case study. A series of quantitative models (Computable Generated Equilibrium and gravity models) are discussed to identify the broad shifts that would result from agricultural liberalisation and who would be the winners and losers. The theoretically anticipated winners and losers are then qualitatively discussed to assess the extent to which the winning sectors of agricultural liberalisation could absorb the losers of agricultural liberalisation.

While it can only be a matter of time until the EU and Morocco have to dismantle their border protection, for the hugely detrimental effects that could potentially occur in especially Morocco as a consequence of agricultural liberalisation to be avoided, liberalisation must be progressive, asymmetrical and coupled with evidence based and targeted measures to support rural populations in either diversifying on farm, off farm, or intensifying. The EU has an important role to play as a potential partner in trade led economic development in both its role as a donor, and as a key trading partner and export market for Morocco.
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List of acronyms and abbreviations

AA  Association Agreement
ADA  Agence pour le Développement Agricole
AVG  Average
BP   Barcelona Process
BRC  British Retail Consortium
CAP  Common Agricultural Policy
CGE  Computable General Equilibrium
COFRAC  Association chargée de l'accréditation des laboratoires, organismes certificateurs et d'inspection
EACCE  Etablissement Autonome de Contrôle et de Coordination des Exportations
EC   European Commission
EMA  Euro-Mediterranean Area
EMFTA Euro-Mediterranean Free Trade Area
ENPI  European Neighbourhood Policy Instrument
EPS  Entry Price System
EPQ  Export Preferential Quota
EU  European Union
Eurepgap  Euro-Retailer Produce Working Group for Good Agricultural Practices
F&V  Fruit and Vegetables
Femise Forum Euro-méditerranéen des Institut des Sciences Économiques
FTA  Free Trade Agreement
GAFTA Greater Arab Free Trade Area
GDP  Gross Domestic Product
HACCP Hazard Analysis Critical Control Point
HH  Household
IFPRI  International Food Policy Research Institute
ISO  International Standards Organisation
MFN  Most Favoured Nation
MPC  Mediterranean Partner Country
MTE  Maximum Tariff Equivalent
NTB  Non-Tariff Barrier
ONSSA Office National de Sécurité Sanitaire des Produits Alimentaires
PTA  Preferential Trade Agreement
SIV  Standard Import Value
SPS  Sanitary and Phyto-sanitary
TRQ  Tariff Rate Quota
UAA  Utilised Agricultural Area
WTO  World Trade Organisation
I. Introduction

‘The European Commission’s Directorate-General for Trade helps through the EU’s trade policy to secure prosperity, solidarity and security in Europe and around the globe. (…) Our success in Europe is inextricably bound up with the success of our trading partners, both in the developed and developing world. For this reason, sustainable development and development policy in general are central to our overall approach.’ (Extract from DG trade’s mission statement, 2011).

Similarly, in designing its development policies, DG Development places a strong emphasis on policy coherence across 12 policy areas, which include both agriculture and trade. These two policy areas are firmly intertwined, as developmental coherence in agriculture cites markets and opportunities for enterprise as a key issue, which is directly linked to the recognition of trade as an engine of development and poverty alleviation (DG Development, 2011).

DG Development is responsible for the design and implementation of EC external assistance in Sub-Saharan Africa, Asia, Central Asia, the Pacific, Latin America, the Caribbean, and the set of regions that are now covered by the European Neighbourhood Policy Instrument (ENPI): Russia, Eastern Europe, North Africa and the Middle East. In view of the proximity of the ENPI region to the EU, the prosperity of ENPI countries impact the EU directly, making the design and implementation of this policy one of particular interest to the EU (after Enlargement) (Glennie, 2011).

As written in DG Development’s 2011 annual report:

‘The European Neighbourhood Policy (ENP) offers 16 of the EU’s southern and eastern neighbours closer political association, enhanced trade and economic integration, greater mobility and assistance in sectoral reforms. The aim of the ENP, as set out in its strategic documents, is to build, together a prosperous, secure and stable neighbourhood on the basis of shared values and common interests.’ (p. 28: EuropeAid Annual report, 2011)

This is particularly true in the ENPI South region (North Africa and the Middle East), as it and the EU work towards a Euro-Mediterranean Free Trade Area (EMFTA). Within the ENPI region, Morocco is the recipient of the largest amount of funding, with an indicative budget of 580M€ for the period 2011 to 2013 (Europolitics, 2011). The significance of Morocco as a trading partner and a recipient of development assistance make it an interesting case through which to examine the coherence of the EU’s approaches in trade and development, and the EU’s capacity to be a partner in trade led development.

This paper will begin with an overview of the Barcelona process that governs EU-Morocco relations and the role and structure of agriculture in each case. In the 3rd chapter, the impacts of liberalisation between the EU and Morocco will be discussed giving an overview of the theoretical winners and losers (with a focus on Morocco) and poverty effects of liberalisation. The final section of this chapter will examine factors besides tariffs that affect trade flows between the EU and Morocco.

Based on the analysis the factors that affect trade flows, the 4th chapter will isolate the case of tomatoes, the chain actors involved, and advantages Morocco has in producing tomatoes. Given the winners and losers of liberalisation, the 5th chapter analyses Morocco’s capacity to adjust to
liberalisation so as to avoid its most detrimental effects; in other words the capacity of the tomato chain to absorb surplus labour from agricultural sectors that lose as a consequence of liberalisation.

The sixth and final chapter concludes with the policy coherence exhibited by the EU in its dealings with Morocco, and ends with a series of recommendations.

II. The policy context

The EU and Morocco

Since 1995, the relations between the EU and 12 Southern Mediterranean countries have been governed by the Barcelona process which forms the basis of the Euro-Mediterranean Partnership. The Barcelona declaration committed the participating countries to strengthen regional integration and cooperation through political and security dialogue, economic and financial partnerships and social, cultural and human partnerships the aim of which was to increase prosperity in the region and stimulate balanced and sustainable economic development (Cioffi, Aquila, 2004; Montanori, 2007; Emlinger, Jacquet, Lozza, 2008; European Commission, 2011). The core of the Barcelona Process (the economic and financial partnerships) was to set-up bilateral Free trade Agreements (FTA) with each Mediterranean Partner Country (MPC), and to establish a Euro-Mediterranean Free Trade Area (EMFTA) by 2010 (Coque, 2006; Montanori, 2007).

In practice, the economic component of the Barcelona Process had a given schedule for reciprocal industrial liberalisation (over 12 years), but not for agricultural liberalisation (Coque, 2006; Montanori, 2007) which, despite its importance to MPC, remained subject to preferential trade agreements (PTA) with seasonal market access to EU markets (Grethe, Nolte, Tangermann, 2005; IFPRI 2007; Emlinger, Jacquet, Lozza, 2008).

Thus, though the Barcelona Process committed MPC to reciprocate the preferential access they previously enjoyed on EU markets – e.g. the EU gained un-fettered access to MPC markets for its industrial products, and preferential access to MPC markets for EU temperate products such as cereals - MPC have obtained limited benefits from this process compared with the pre-existing status (Grethe, Nolte, Tangermann, 2005; Coque, 2007; IFPRI, 2007).

Indeed, despite its objectives, the launch of the Barcelona process has not deepened EU-MPC trade (Femise, 2003; Montanori, 2007). 46% of BP country agricultural exports go to the EU, representing a weak 2% of EU imports – a figure that has remained stable since the 1990’s. While the enlargement process of the EU during this period has certainly had a detrimental effect on trade flows between MPC and the EU (Coque, 2007; Montanori, 2007), the lack of trade intensification is primarily seen as a reflection of the exclusion of agriculture from the BP and the asymmetrical importance of EU and MPC markets to each other (Femise, 2003; Montanori, 2007; Emlinger, Jacquet, Lozza, 2008). In fact, the results of the Barcelona Process are widely cited as being below expectations, in that rather than increasing trade flows between MPC’s and the EU, the period since the BP has merely served to sustain existing traditional trade flows (Coque, 2006; Coque, 2007) – as visible in table 2.1 below charting EU imports from Morocco between 2006 and 2010.

In 2005, on its tenth anniversary, the Barcelona Process was given a renewed impetus with an agreement on a 5 year programme focused on 3 areas: education, Human Rights and democracy and
sustainable economic development which placed agricultural liberalisation at the heart of the
debate with the Euro-Mediterranean road map on agriculture (EC workshop 2006; Coque 2007;
Emlinger, Jacquet, Lozza, 2008). The road map was based on reciprocity, albeit with asymmetrical
dismantling of protection, and allowing for a number of sensitive products to be excluded from the
liberalisation process (European Commission, 2004; Emlinger, Jacquet, Lozza, 2008).

Indeed, agriculture was seen as a key tool with which to further the integration of the EU and
Morocco who have long been key partners. Alongside Turkey and Israel, Morocco is one of the main
Mediterranean agricultural suppliers to the EU, a sector in which it has a positive trade balance with
the EU (overall, the EU has a positive trade balance with Morocco) (European Commission, 2011).

Since the road map, the integration process between Morocco and the EU has deepened, and
Morocco has become the first MPC to obtain the advanced status in 2008. The advanced status
reflects Morocco’s efforts towards institutional strengthening to be able to deepen its regional
integration with the EU (European Commission, 2011).

The advanced status of Morocco is visible in its ranking as a beneficiary of external assistance as it
receives the biggest volume of ENPI external assistance funding (580.5M€ committed funds for the
period 2011-2013) (Europolitics, 2011). However, this status is not yet visible in trading figures. EU
imports from Morocco have remained stable between 2006 and 2010, during which time only EU
exports to Morocco have slightly increased (European Commission, 2011).

Table 2.1: European Union imports from Morocco, by product grouping

<table>
<thead>
<tr>
<th>SITC Rev. 3 Product Groups</th>
<th>2006</th>
<th>2008</th>
<th>2010</th>
<th>Share of total EU imports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Millions euro</td>
<td>%</td>
<td>Millions euro</td>
<td>%</td>
</tr>
<tr>
<td>0000 - Total</td>
<td>7,218,1</td>
<td>100,0</td>
<td>8,403,7</td>
<td>100,0</td>
</tr>
<tr>
<td>1000 - Primary products</td>
<td>2,922,4</td>
<td>34,9</td>
<td>2,995,6</td>
<td>35,9</td>
</tr>
<tr>
<td>1100 - Agricultural products</td>
<td>1,792,8</td>
<td>24,8</td>
<td>1,961,5</td>
<td>23,8</td>
</tr>
<tr>
<td>1200 - Non-food raw materials</td>
<td>729,6</td>
<td>10,1</td>
<td>1,024,1</td>
<td>12,7</td>
</tr>
<tr>
<td>2000 - Manufactures</td>
<td>4,953,8</td>
<td>63,5</td>
<td>4,997,7</td>
<td>59,5</td>
</tr>
<tr>
<td>2100 - Iron and steel</td>
<td>46,4</td>
<td>0,7</td>
<td>26,5</td>
<td>0,3</td>
</tr>
<tr>
<td>2200 - Chemicals</td>
<td>108,7</td>
<td>1,5</td>
<td>150,8</td>
<td>1,9</td>
</tr>
<tr>
<td>2300 - Other non-metallic manufactures</td>
<td>97,2</td>
<td>1,4</td>
<td>112,9</td>
<td>1,4</td>
</tr>
<tr>
<td>2400 - Machinery and transport equipment</td>
<td>1,241,5</td>
<td>17,2</td>
<td>1,401,6</td>
<td>16,7</td>
</tr>
<tr>
<td>2410 - Office and telecommunication equipment</td>
<td>221,2</td>
<td>3,1</td>
<td>277,7</td>
<td>3,4</td>
</tr>
<tr>
<td>2490 - Transport equipment</td>
<td>115,7</td>
<td>1,6</td>
<td>145,0</td>
<td>1,7</td>
</tr>
<tr>
<td>2500 - Other machinery</td>
<td>906,6</td>
<td>12,5</td>
<td>1,122,0</td>
<td>13,4</td>
</tr>
<tr>
<td>2700 - Textiles</td>
<td>107,0</td>
<td>1,5</td>
<td>125,1</td>
<td>1,5</td>
</tr>
<tr>
<td>2800 - Clothing</td>
<td>2,094,1</td>
<td>33,2</td>
<td>2,327,0</td>
<td>27,7</td>
</tr>
<tr>
<td>2909 - Other manufactures</td>
<td>299,7</td>
<td>5,5</td>
<td>414,5</td>
<td>5,0</td>
</tr>
</tbody>
</table>

Source: European Commission, 2011

Thus, though the principles are in place, progress towards liberalisation – especially agricultural -
remains slow (Philippidies and Sanjuan, 2006).

The following section will review the key points of the structure of agricultural policies and their role
in the EU and Morocco that are relevant to this argument.

**Agriculture in Morocco**

Morocco has a population of 32 million inhabitants, of which 57% are urban and 43% rural. Though
Morocco is undergoing structural transformation, with agriculture playing a declining role in overall
economic growth, agriculture remains economically and socially important (Grethe, Chemnitz, 2005; IFPRI, 2007). Depending on rainfall, agriculture represents 15 to 18% of GDP and in 2002/3, 18% of the value of total Moroccan exports, and 23% of exports to the EU (Philippidis and Sanjuan, 2006). Socially, agriculture remains the key employer nationally and in rural areas. Overall, (though figures vary) approximately 35% of the population is employed in agriculture, with approximately 80% of the active rural population employed in agriculture, of which 22% in the horticultural sector (Grethe, Chemnitz, 2005; Philippidis and Sanjuan, 2006; IFPRI, 2007).

Socially, agriculture remains the key employer nationally and in rural areas. Overall, (though figures vary) approximately 35% of the population is employed in agriculture, with approximately 80% of the active rural population employed in agriculture, of which 22% in the horticultural sector (Grethe, Chemnitz, 2005; Philippidis and Sanjuan, 2006; IFPRI, 2007).

Figure 2.1: Structure of employment in Morocco, nationally (left) and in rural areas (right)
Source: Moroccan Ministry of Agriculture, 2010

Rather typically for middle income countries, poverty is a primarily rural phenomenon in Morocco (Femise 2003; IFPRI, 2007). One quarter of the rural population is poor, compared with one tenth in urban centres. Overall, 66% of the poor live in rural areas, although the share of urban poverty is growing (which is also influenced by rural exodus with approximately 180.000 rural migrants heading for the urban centres each year) (IFPRI, 2007). Overall, for 75% of the poor, agriculture is the dominant source of income (IFPRI, 2007).

For want of more up to date information, the table below gives a rapid picture of farm structure in Morocco in 1996. While the overall number of farms will have diminished since then, the overall picture remains very much the same today.

Table 2.2: Size of farms in Morocco in 1996

<table>
<thead>
<tr>
<th>Size in ha</th>
<th>Number of farmers (thousands)</th>
<th>UAA (thousands ha)</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landless farmers</td>
<td>64,7</td>
<td>4,3</td>
<td>-</td>
<td>0,0</td>
</tr>
<tr>
<td>0-1</td>
<td>315,3</td>
<td>21,1</td>
<td>170,4</td>
<td>2,0</td>
</tr>
<tr>
<td>1-3</td>
<td>446,7</td>
<td>29,8</td>
<td>904,7</td>
<td>10,3</td>
</tr>
<tr>
<td>3-5</td>
<td>237,7</td>
<td>15,9</td>
<td>1011,1</td>
<td>11,6</td>
</tr>
<tr>
<td>5-10</td>
<td>247,8</td>
<td>16,6</td>
<td>1894,7</td>
<td>21,7</td>
</tr>
<tr>
<td>10-20</td>
<td>125,2</td>
<td>8,4</td>
<td>1880,5</td>
<td>21,5</td>
</tr>
<tr>
<td>20-50</td>
<td>47,9</td>
<td>3,2</td>
<td>1526,3</td>
<td>14,5</td>
</tr>
<tr>
<td>50-100</td>
<td>7,8</td>
<td>0,5</td>
<td>585,1</td>
<td>6,7</td>
</tr>
<tr>
<td>100+</td>
<td>3,2</td>
<td>0,2</td>
<td>759,4</td>
<td>11,7</td>
</tr>
<tr>
<td>Total</td>
<td>1 496,3</td>
<td>100,0</td>
<td>8732,2</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Source: FAO, 2001
The above picture clearly shows that small family farms are the back bone of the agricultural sector in Morocco. Small farms (of less than 5ha) are characterised by poverty, vulnerability to drought, limited access to credit, a reliance on a blend of income streams, covering the production of cereals, livestock, and fresh F&V, and reliance on wage labour (such as temporary urban migration, or off farm unskilled labour) (FAO, 2001).

IFPRI (2007) describes the recent evolution of Morocco’s agricultural sector in 3 phases during which Morocco has endeavoured to reconcile the conflicting aims of Moroccan agriculture: to exploit its comparative advantage in exports, while meeting internal demand through import substitution and price control (Femise, 2003; IFPRI 2007). In broad brush strokes, the three phases comprise:

1. 1956-1980’s: high government intervention in agriculture. In the 1960’s, the key tool used by the Moroccan government was the ‘policy of dams’ to increase irrigation, and, at the end of the decade, the encouragement of modern farming techniques to boost yields (while retaining subsidies to water). Grain and milk prices were controlled so as to provide cheap food for urban consumers (where the cost of labour is linked to food supplies); however, F&V or olive oil prices were not regulated as they were promoted as a source of export earnings, using modern techniques, pesticides, hybrid seeds and greenhouses (Femise 2003; Aloui, Kenny, 2004). Only in the 1970’s did attempts to support producers as well as consumers arise, however, this led to an unsustainable financial burden for the Moroccan government (Femise, 2003; IFPRI, 2007).

2. 1980’s to 1995: structural adjustment programmes, lower government intervention and increased involvement of the private sector. The previous government policies led to a financial crisis in the 1980’s which resulted in programmes aiming to liberalise agricultural markets and encourage private investment. Concretely this involved the elimination of subsidies, the diminished role of government, and the elimination of barriers to trade. However, subsidies for irrigation water and agricultural equipment remained. Similarly, wheat, vegetable oil and sugar prices (considered to be sensitive products) remain subsidised, and in general Morocco retains relatively high levels of import protection.

3. 1995 to today: Morocco has increasingly integrated into the world economy visible through its commitments to various trade agreements with, for example, neighbouring North African countries (GAFTA), the US in 2004, and the EU (Association Agreement came into force in 2000).

The result of these successive policies is a two speed (modern versus traditional) agricultural sector. On the one hand, there is the production of temperate products (in dairy, meat, cereals) in mainly rain fed agriculture (Grethe, Nolte, Tangermann, 2005) all of which remain protected sectors (Philippidis and Sanjuan, 2006; IFPRI, 2007), thanks to a system of seasonally applicable import tariffs and negotiated entry prices with trading partners (Ahmed, 2010). However, it should be noted that despite the protection of its domestic cereal production, wheat is Morocco’s main import, equal to 7 to 15% of the total value of exports since the 1990’s, also meaning that 10% of Morocco’s fiscal revenue comes from import duties (IFPRI, 2007).

On the other hand, Morocco’s horticultural sector has greatly increased in volume and value of exports since the national export monopoly was liberalised in 1986 (Grethe, Chemnitz, 2005). After livestock and wheat, horticulture is the most important agricultural sector.
**The EU’s Fruit and Vegetable regime**

The EU is one of the world’s big players in the agricultural sector. It is a leading importer and exporter of agricultural products, the production, import and export of which are governed by the EU’s common agricultural policy. Despite this, European agriculture contributes only 1.1% to GDP, and 4% to labour (DG Agriculture and Rural Development, 2009).

Under the EU’s Common Agricultural Policy (CAP), EU agriculture has a comparative advantage in temperate products such as cereals, meat and milk thanks to a system of inter-linked agricultural policies. On the other hand, the EU has a comparative disadvantage in the production of F&V as this sector has received relatively little funding under the EU’s Common Agricultural Policy (CAP). F&V comprise 16% of agricultural production but receive only 4% of CAP funding (Femise, 2003).

Nonetheless, in terms of millions of tons produced and consumed, the EU seems to be self-sufficient in F&V. Indeed, the EU is the third largest producer in the world with 8% of F&V production; coming behind India, with 10% of world production, and China - the biggest F&V producer with about 35% of world production (European Commission, 2004).

However, reality is a little different. The EU’s balance in F&V is negative, as its imports are higher than its exports. The EU imports 16Bio€ worth of imports compared to only 5Bio€ worth of exports (2005 figures), and is in fact the world’s largest importer of F&V (European Commission, 2003; European Commission, 2004).

Within this context, F&V form the bulk of trade flows between MPC’s and the EU, the trade of which is governed by a complex system of policies. F&V are a key sector involved in the negotiations between the EU and MPC’s (Akesbi, 2006). As such, and rather than delving into a review of the entire EU’s CAP, the next section will restrict itself to a review of the EU’s F&V regime.

Current EU support to F&V producers includes border measures (discussed in the next section) and internal market measures. Internal market measures are dominated by support to Producer Organisations, such as (Cioffi, Aquila, 2004):

- Increasing market power (e.g. concentrating supply),
- Improving marketing (e.g. packaging support),
- Price stabilisation (e.g. market withdrawals in extreme cases).

The result is that current trade of F&V in the EU is dominated by intra European trade (Aloui, Kenny, 2004; Emlinger, Jacquet, Lozza, 2008). However, Mediterranean Partner Countries (MPC) are the primary non EU supplier with one quarter of F&V market share (Aloui, Kenny, 2004). For example, 87% of imported tomatoes in the EU are imported from MPC, of which 78% come from Morocco (Montanori, 2007).

These figures are at the heart of resistance to further liberalisation of the EU’s F&V regime. The EU’s poorest farmers are frequently in F&V producing regions which are located around the Mediterranean, such as Spain, Italy, and Greece. Because of the overlapping seasons and similar climates these producers fear competition from MPC, namely Morocco (Coque, 2007; IFPRI, 2007).
This has resulted in the application of two different import policies for F&V (Grethe, Chemnitz, 2005). In general, F&V, olive oil, and fish product imports (known as typical Mediterranean products) are all subject to ad valorem tariffs under the Most Favoured Nation (MFN) tariffs which were implemented as a result of the Uruguay Round Agreement on Agriculture (URAA). However, for some products declared by the EU as being sensitive, imports are regulated by the Entry Price System (EPS) (Femise 2003; Grethe, Nolte, Tangermann, 2005; Emlinger, Jacquet, Lozza, 2008). The EPS establishes a minimum import price, also known as a trigger price. Trigger prices are defined per product and vary between seasons (Emlinger, Jacquet, Lozza, 2008).

Under this system, the entry price of the imported good is established (Pe in figure 2.2 below) – most frequently on the basis of the Standard Import Value (SIV) which is calculated daily by the EC for every product subject to an entry price according to its origin. The SIV is the price of a particular product in its country of origin minus transport and marketing costs (Cioffi, Aquila, 2004).

If the good’s entry price (usually the SIV) is below the trigger price (see the second column in figure 2.2 below), a specific additional duty is charged equal to the difference between the price of the good (SIV) and the given trigger price (Grethe, Chemnitz, 2005; Emlinger, Jacquet, Lozza, 2008). However, if the SIV is less than 92% of the trigger price, the EC charges a prohibitive additional duty (known as the Maximum Tariff Equivalent) – as seen in column 3 in Figure 2.2 below (Grethe, Nolte, Tangermann, 2005).

![Figure 2.2: The EU’s entry price system](image)

The set-up and implementation of the EPS juggles a number of objectives important to the EU:

- To limit price fluctuations in the EU for sensitive products (Emlinger, Jacquet, Lozza, 2008),

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1 Amongst others, these include tomatoes, cucumbers, gherkins, artichokes, courgettes, organs, tangerines, clementines, lemons and limes, apples, pears, apricots, cherries, peaches, prunes and grapes (Emlinger, Jacquet, Lozza, 2008).
To keep cheap goods out of the EU market during the EU’s production period during which time high duties are charged (Cioffi, Aquila, 2004; Emlinger, Jacquet, Lozza, 2008),
- To protect Southern European producers (Cioffi, Aquila, 2004),
- To maintain traditional import flows (Cioffi, Aquila, 2004),
- To nurture political and diplomatic ties with developing countries (Cioffi, Aquila, 2004).

The extent to which the EPS achieves these objectives, for example, the case of imports of MPC tomatoes is visible in figure 2.3 below. Over the European summer period, EU tariffs and imports are a mirror image of each other, with high tariffs, and low imports of tomatoes. The opposite is true over the European winter period when tariffs are relatively low, and European imports of tomatoes are high (Emlinger, Jacquet, Lozza, 2008).

Figure 2.3: European imports and tariffs for Mediterranean tomatoes, 2004
Source: Emlinger, Jacquet, Lozza, 2008

In sum, trade and trade negotiations within these national policies, are complex. Compounding this is the asymmetry of the relationship between the EU and Morocco. Firstly, while the EU is Morocco’s first trading partner representing 59% of imports, and 62% of exports, Morocco only represents 0.5% of imports to the EU, and 1% of exports from the EU (European Commission, 2011) giving it a weak bargaining position (Philippidis and Sanjuan, 2006). Secondly, as the description above demonstrates, the importance of agriculture socially, as an export sector, and in the domestic market is very different in the EU and in Morocco.

The following chapter is split into three parts. The first will review a series of quantitative studies that analyse the effects of agricultural liberalisation between the EU and Morocco; the second part will provide an overview of the theoretical poverty effects of liberalisation, and the third part will discuss the factors beyond tariffs that models have identified as affecting trade flows.
III. The effects of agricultural liberalisation between the EU & Morocco

Modelling the effects of liberalisation of agricultural trade is notoriously complex. Firstly, modelling tends to suffer from a lack of information on non-tariff barriers (infrastructure, rules of origin, private standards). Secondly, as we have seen above, trade policies are complex (EPS, seasonality, tariff rate quota’s, preferential trade agreements), and difficult to account for in a given model. Finally, most models give static results. In other words, they give the short run effects of liberalisation and are not able to predict the dynamic costs and benefits that would occur over time as the factor markets adapt to their new set of incentives and constraints.

In fact, there is no perfect model. Computable General Equilibrium (CGE) models provide economy wide conclusions. This is particularly interesting for modelling the effects of agricultural liberalisation in a country where agriculture carries a lot of weight (as is the case in Morocco), as the results provide insight into the ripple effects throughout the economy. However, CGE model results suffer from limited disaggregation, a poor ability to represent policies, and strong assumptions (such as full employment, fixed balance of payments) – as such they may not have the capacity to fully capture the specificities (seasonality and different policy instruments) of F&V. Partial Equilibrium (PE) models on the other hand, provide a good disaggregation of results and policy representation – and thus are a good approach to respond to the specificities of F&V which make up the bulk of Moroccan-EU trade flows – but they provide little insight into the impact beyond the given sector (EC workshop, 2006; Coque, 2007).

Gravity models are also used to predict bilateral trade flows. Gravity modelling is a function of the size of the countries in question (usually GDP) to determine the size of the demand and supply of the importing and exporting country (Coque, 2007), and the distance between them. Distance and transport costs are of particular relevance to the agro-food sector, and within this sector especially fragile, perishable items - such as tomatoes – and thus are a particularly interesting instrument with which to analyse Morocco to EU trade flows (Philippidis and Sanjuan, 2006).

Theoretical welfare effects of agricultural liberalisation between the EU & Morocco

Though Morocco has a positive trade balance overall with the EU in the agricultural sector, this hides significant discrepancies within this category. A more detailed review of Morocco’s agricultural trade balance with the EU shows a positive trade balance in vegetable products representing 12.2% of total EU imports from Morocco (European Commission, 2011), and a negative balance in crops (Philippidis and Sanjuan, 2006).

The key points that are required in terms of agricultural liberalisation between the EU and Morocco are increased market access to each other’s markets: for Morocco, increased access for its fruit, vegetable, olive oil and fisheries exports, and for the EU, access for its continental agricultural products (mainly cereals) (EC workshop, 2006). However, though both parties are keen to increase their access to each other’s markets, they are also keen to protect certain sectors deemed as sensitive to prevent reduced welfare of certain producer groups (EC workshop, 2006). The EU wishes to protect its producers of fruit and vegetables in Southern Europe, while Morocco wishes to protect its producers of cereals and livestock in primarily rain fed areas (EC workshop, 2006).
Indeed, Morocco continues to both protect its producers and consumers. Producers of cereals and livestock, as seen in the WTO’s overview of tariffs for Morocco in table 3.1 below, are shielded by an import substitution policy under which they are protected by import tariffs as high as 100%. Consumers on the other hand, are protected by a system of subsidies that control the consumer price of cereals. In view of this, there is concern that agricultural liberalisation in Morocco would entail an increase in the consumer price of wheat. Morocco is a net food importer overall, and imports between one half and one third of its cereals making it vulnerable to price shocks (IFPRI, 2007).

Table 3.1: Moroccan tariffs and imports by product groups in 2011

<table>
<thead>
<tr>
<th>Product groups</th>
<th>Final bound duties</th>
<th>MFN applied duties</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVG in %</td>
<td>Duty-free</td>
<td>Max in %</td>
</tr>
<tr>
<td>Animal products</td>
<td>94.5</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Dairy products</td>
<td>76.7</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Fruit, vegetables, plants</td>
<td>34.0</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Coffee, tea</td>
<td>34.0</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>Cereals &amp; preparations</td>
<td>59.4</td>
<td>0</td>
<td>195</td>
</tr>
<tr>
<td>Oilseeds, fats &amp; oils</td>
<td>86.9</td>
<td>0</td>
<td>236</td>
</tr>
<tr>
<td>Sugars and confectionery</td>
<td>134.5</td>
<td>0</td>
<td>168</td>
</tr>
<tr>
<td>Beverages &amp; tobacco</td>
<td>34.0</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>Cotton</td>
<td>22.0</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>Other agricultural products</td>
<td>33.7</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Fish &amp; fish products</td>
<td>39.5</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Minerals &amp; metals</td>
<td>39.4</td>
<td>0.2</td>
<td>45</td>
</tr>
<tr>
<td>Petroleum</td>
<td>40.0</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Chemicals</td>
<td>39.0</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Wood, paper, etc.</td>
<td>39.0</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Textiles</td>
<td>41.8</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Clothing</td>
<td>40.2</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Leather, footwear, etc.</td>
<td>39.7</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td>36.8</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>37.8</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>38.7</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Manufactures, n.e.s.</td>
<td>39.2</td>
<td>0</td>
<td>45</td>
</tr>
</tbody>
</table>


However, in reality, and despite consumer subsidies, Morocco’s domestic consumer prices for wheat are consistently higher than world prices, as visible in the two bottom rows of the comparative table 3.2 below. Thus, Moroccan consumers currently pay a higher price for their wheat than they would otherwise pay if they had access to world market prices (World Bank, 2004).
Table 3.2: Comparative prices of common wheat in Morocco and at world prices

<table>
<thead>
<tr>
<th></th>
<th>Dec-09</th>
<th>Nov-09</th>
<th>Dec-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common wheat in Morocco (MAD)</td>
<td>2500</td>
<td>2730</td>
<td>2290</td>
</tr>
<tr>
<td>Common wheat in Morocco (€)</td>
<td>219</td>
<td>240</td>
<td>201</td>
</tr>
<tr>
<td>Common wheat at world prices (€)</td>
<td>147</td>
<td>134</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: own elaboration based on USDA, FAO, European commission budget websites

To best understand the effects of the removal of an import tariff on a small economy, a graphical representation is given below in figure 3.1. Let’s assume that Morocco’s current domestic market price for wheat is priced at $P_D$ in the figure below. After liberalisation, Morocco’s domestic price would drop to $P_w$. This would result in an increase in consumer surplus (green area), a drop in producer surplus (blue area), and a drop in government revenue (red area).

In fact, all models agree on the results of agricultural liberalisation between the EU and Morocco. Agricultural liberalisation would lead to a drop in the production of cereals and meat in Morocco (loss of producer surplus) as EU imports of cereals and meat increase (Femise, 2003; Philippidis and Sanjuan, 2006; Coque, 2007; IFPRI, 2007;) giving Moroccan consumers of these products access to them at cheaper prices (gain in consumer surplus).

On the other hand, liberalisation would bring about a potential increase in Moroccan exports of F&V, especially tomatoes, thus potentially decreasing production of F&V in Southern European countries. Thus liberalisation would increase consumer welfare on both sides of the Mediterranean, but would
also negatively affect producers (of different products) on both sides of the Mediterranean (Philippidis and Sanjuan, 2006; Coque, 2007).

Finally, studies also all tend to agree that the impact of liberalisation (good and bad) will be higher in Morocco given the importance of agriculture in Morocco relative to its importance in the EU. The disagreement lies in the assessment of the size of the impact in question. The contentious area of the discussion is reflected in the above figure 3.1 by the two green triangles. The green triangles depict social welfare gain with the debate revolving around the trade off’s involved in leading up to this overall social welfare gain, and what they mean in practice at the household level.

This lack of agreement is visible in the varying results of different models in the extent of the impact and its social consequences in each case depending on their level of disaggregation, assumptions, approach and the modelled scenario (unilateral, bilateral or multilateral liberalisation) (Philippidis and Sanjuan, 2006). In addition, uncertainty stems from the fact that Morocco cannot control its external environment. In other words, the issue of only partially accessible markets in Morocco’s key destination market remains. Will there be additional export opportunities for the production boost in exportable F&V in the EU (IFPRI, 2007)? Indeed, a common finding of CGE modelling of MPC-EU agricultural liberalisation is that a unilateral liberalisation by an MPC (in this case Morocco) would lead to a drop in welfare if there is no accompanying reciprocal liberalisation in the EU (Coque, 2007).

**Households, poverty and liberalisation**

But at the end of the day, nation-wide averages of winners and losers are only partially useful. Ultimately, changes in income levels are theoretically determined by the economic growth rate of a country, and practically determined by its distribution (World Bank, 2004). Thus, for a concrete understanding of the poverty effects of trade policy and the required countervailing policies, one needs to understand the repercussions of trade policies on households. Because of the heterogeneity at this level, analysis is difficult. Nevertheless, Ravaillon and Lokshin conducted such an exercise based on a 1998/99 household survey. Their analysis seeks to identify the causal effects of trade policies on households by considering the identified price effects on HH expenditures, HH factor returns, and fiscal revenue (IFPRI, 2007).

In the event of a full liberalisation scenario, Ravaillon and Lokshin found a 24% drop in producer prices, and a 27% drop in consumer prices. In this scenario, urban (rich and poor) households (HH) gain as they are net grain consumers. This would result in a drop in urban poverty from 12.2% to 11.8% (the drop is relatively small as HH expenditure on grain products is relatively little in urban HH) (IFPRI 2007).

In rural areas a HH survey reveals that 60% of poor HH are net consumers of grain. But the losses to rural producers are greater than the gain to rural consumers on a HH basis. Thus the overall welfare gain is negative, resulting in an increase in rural poverty from 28.3% to 34.2%. These results contradict conventional wisdom that the poor are net consumers of grain (Femise, 2003; IFPRI 2007).

Indeed, grain and livestock farmers tend to be small traditional rain fed farmers (IFPRI, 2007) whose HH depend on several income streams for their livelihoods. Overall, though some poor rural HH may be net sellers of grain, the bulk of their income stems from mainly unskilled labour (Logfren, 1999).
Thus, the profile of the immediate losers of agricultural liberalisation are poor rural HH located in rain fed areas whose income depends on unskilled labour, cereals and livestock (Femise, 2003; Logfren, 1999).

In the same vein, IFPRI (2007), and Femise (2003) conclude that if left up to market forces, liberalisation would have unequal distributional effects on Moroccan society, leading to negative returns to unskilled agricultural labour, and positive returns to skilled urban labour, thus exacerbating existing poverty in rural areas, and rural exodus (Femise, 2003; IFPRI, 2007); ‘In sum, (...) agricultural de-protection involves a trade off between significant gains in aggregate and urban welfare and significant losses in rural welfare. (...) it is the poor who are most strongly affected, negatively in rural areas and positively in urban areas.’ (p.15:1999, Logfren)

As succinctly summarised in a Femise report, food roughly takes up 35% of HH budgets, and is responsible for close to 40% of employment. After liberalisation, both these figures will be reduced (Femise, 2003). However, as mentioned above, modelling and the conclusions of these, mostly consider the short run effects of liberalisation and do not take into account the dynamic effects – for example, the changes in labour demand and wages (IFPRI, 2007).

Thus, economic reform may be possible to promote the more rapid development of potential dynamic effects, and steer households towards opportunities that could be open to them in a liberalisation scenario. The requirements of such reforms are the subject of the conclusion. In the mean time, the next section will give an overview of the existence of factors, besides formal tariff barriers, that affect trade flows.

**Other factors affecting trade flows of fruit and vegetables**

In the previous section, the conclusion that one reaches is that trade flows between countries are strongly determined by the negotiated tariff levels between trading partner countries. Thus, if these tariff barriers were to be dismantled, the trade flows between two given countries would tend to be a simple reflection of the countries’ comparative advantages.

However, there are other characteristics which define trade between countries. One such characteristic is that the bigger the differences in per capita income, the less likely are countries to trade with each other (Philippidis and Sanjuan, 2006). Per capita incomes are basically a proxy for different factor endowments. Generally speaking, differences in factor endowments negatively affect the food sectors, raw material and utilities, and positively affect trade in light manufacturing and textiles (Philippidis and Sanjuan, 2006). Trade between Morocco and the EU is in fact composed of products which span these two categories: Morocco imports machinery and transport equipment, and cereals from the EU; the EU imports F&V, textiles, and machinery and transport equipment from Morocco (European Commission, 2011).

Thus, in some cases trade flows are not only a reflection of agreed tariff barriers and preferential agreements. For example, the export of F&V from Israel to the EU face high tariffs compared to Morocco, but models pick up less border effect in its access to EU markets (Coque, 2007; Emlinger, Jacquet, Lozza, 2008).

The results of gravity models especially, have been useful in providing factors besides tariffs that affect trade in F&V. Firstly, especially in the case of perishable F&V, distance is an impediment to
trade. In other words, proximity to the export market is a significant advantage (Philippidis and Sanjuan, 2006; Coque, 2007; Emlinger, Jacquet, Lozza, 2008). Secondly, the size of the economy matters, especially that of the exporting country as it has implications on the quality control facilities and exporting infrastructure (Philippidis and Sanjuan, 2006; Coque, 2007; Emlinger, Jacquet, Lozza, 2008). Thirdly, cultural and historical links play a role in explaining trade patterns (Philippidis and Sanjuan, 2006; Coque, 2007; Emlinger, Jacquet, Lozza, 2008). In the case of Morocco, preferential access has its origins in colonial times when the Moroccan F&V market was more or less integrated into the French market (Grethe, Chemnitz, 2005).

Thus, the key costs impeding trade levels can be determined by (Coque, 2007; Emlinger, Jacquet, Lozza, 2008):

- The degree of common history and language,
- Distance (especially for perishable products, the transport of which is more expensive),
- Adaptation to norms;

all of which ultimately affect:

- Information and logistics costs.

One can apply these above factors to the example of Israel. As Israel does not have a geographical advantage, or a higher degree of common history with the EU over Morocco, its advantages must lie elsewhere. A possible explanation for Israel’s export success could be an advantage in adapting to quality norms (which are particularly important in the agro-food sector), responding to demand, and in keeping information and logistical costs low (Coque, 2007; Emlinger, Jacquet, Lozza, 2008).

Similarly, and in addition to its formal rates of protection, Morocco also has barriers that affect imports. Morocco has a complex and expensive series of additional taxes, surcharges, stamp taxes, sales taxes and so on which are levied on imports on top of tariffs, and that are not directly accounted for in most models or by trade policy reform, despite their demonstrated impact on the intensity of trade flows (IFPRI, 2007).

This bundle of issues other than tariffs is referred to as non-tariff barriers. Their importance is visible in the fact that despite the removal of tariffs within the EU common market, there exist intra-EU border effects between EU member states. In other words, EU member states tend to trade nationally and face a border effect between each other despite the fact that concretely there is no border. The reasons for the continued existence of an intra-EU border effect are consumer preferences, differing private norms, and phyto-sanitary standards (Emlinger, Jacquet, Lozza, 2008).

Thus, though difficult to measure, quality regulations and norms undoubtedly impact trade, especially that of developing countries that may struggle to meet the requirements — thus making these standards barriers to trade which are not accounted for in the gravity and CGE models mentioned above (Femise, 2003; Martinez, Poole, 2004; Philippidis and Sanjuan, 2006; Winchester, 2009). Thus, a sole reliance on the liberalisation of formal trade barriers (tariff levels), would reap relatively small gains, compared with a more in depth liberalisation that would include non-tariff barriers, especially a harmonisation of quality and phyto-sanitary standards between partner trading countries (Philippidis and Sanjuan, 2006; Coque, 2007).
In Morocco, F&V make up 65% of agriculture exports, of which tomatoes represent the biggest share (Aloui, Kenny, 2004; Grethe, Chemnitz, 2005). In 2002, tomatoes were 50% of horticultural exports, and 23% of agricultural exports (Grethe, Chemnitz, 2005), and an average of 8% of the value of total food exports (Aloui, Kenny, 2004).

Thus, an analysis of the Moroccan tomato chain (an agricultural export success story with potential scope for expansion in terms of supply and demand) will give us realistic insight into the workings of one food chain, and the possibility of certain sectors, identified as winners of liberalisation, being able to respond to new opportunities and provide sufficient dynamic gains to make up for the losses that agricultural liberalisation would entail.

IV. Opportunities: a case study of the Moroccan tomato chain

While all studies agree in theory that in a liberalisation scenario cereal and livestock producers in Morocco would lose, and that the F&V chain would win, the models are not able to account for institutions, individuals and how they transact. In other words, the degree to which the theoretical results are feasible in practice, or what concrete reforms would be needed to make them possible.

As a case study, this chapter provides an snapshot of the institutional environment – in other words, the interaction between the factors that affect trade flows (tariff and non-tariff barriers) and the actors that make up the Moroccan tomato chain, to discuss (in the next chapter) the extent to which the tomato chain could i) seize the opportunities open to it; and ii) be in a position to absorb additional labour from cereal and livestock production.

In view of the factors previously mentioned that are seen as affecting trade flows, Morocco has been selected on the one hand in view of its geographical proximity to the EU, advanced status within the Barcelona process and the fact that it is the main Mediterranean supplier of tomatoes to the EU (Coque, 2006; IFPRI 2007; European Commission, 2011). To extrapolate conclusions concerning the link between trade and development, Morocco has been selected in view of its position as a lower middle income country beneficiary of the largest volume of EC funding in the ENP region (European Commission, 2011). Tomatoes have been selected in view of the continued success of this chain in Morocco, its growing competition with EU production visible in the continued increase of imports in figure 4.1 below, and the concern that this has generated amongst F&V producers in Southern European countries (Coque 2006; Coque, 2007; Emlinger, Jacquet, Lozza, 2008).
The fresh tomato chain in Morocco

The tomato chain plays an important economic and social role in Morocco. It is the most cultivated fresh vegetable in Morocco (ONSSA, 2008), and represents 65% of exported F&V (EACCE, 2010). Each year, Morocco produces over 1 million tons of tomatoes, 80% of which are for the fresh food market, and 20% for processing (Aloui, Kenny, 2004; ONSSA, 2008). The EU is the main export market for Morocco and absorbs 91% of exported tomatoes (Ministry of Agriculture, 2010); the bulk of which (80%) head for France (Martinez, Poole, 2004; Grethe, Chemnitz, 2005). The EU market for Moroccan tomatoes is driven by (Aloui, Kenny, 2004; Akesbi, 2006):

- EU consumers wanting a year round supply of fresh produce,
- Morocco’s capacity to adopt different technologies,
- Proximity and integration into the cold chain,
- Preferential trade agreements,
- Labour availability, irrigation and climate in Morocco,
- Long standing relationships with EU countries,
- Organised export sector.

Overall, the tomato sector is responsible for 4% of agricultural employment in Morocco (Aloui, Kenny, 2004). 30% of tomato producers are small scale specialised farmers with farms smaller than 5 ha. In total, small producers farm 10 to 15% of total production area for early tomatoes while 10 to 15% of farms are responsible for 40% of production (Grethe, Chemnitz, 2005).

Indeed, the agricultural sector in Morocco is split between marginal (traditional) producers and integrated (modern) producers. Traditional producers sell on the domestic market, whereas modern producers produce for export (Aloui, Kenny, 2004). The tomato chain can also be split along the same lines according to tomato type: greenhouse winter tomatoes for the EU market, and seasonal open air tomatoes for the domestic market (Aloui, Kenny, 2004; ONSSA, 2008).
The early (winter) tomato industry in Morocco has been booming with over 10% growth per year, and relies on the use of modern technologies (Aloui, Kenny, 2004). Between 1980 and 2000 the production of early tomatoes and tomato exports has doubled (Aloui, Kenny, 2004). The trend has continued with another doubling in the volume of exports since 2003 and the tomato chain being hailed as a success (Ministry of Agriculture, 2010).

Figure 4.2: Evolution of Moroccan tomato exports in total
Source: Moroccan Ministry of Agriculture, 2010

The Moroccan tomato chain thus has the capacity to produce the quality and requirements necessary to access the EU market. The bulk of greenhouse tomato production for export (74%) (Aloui, Kenny, 2004; Grethe, Chemnitz, 2005) is concentrated in the Souss Massa region (4 in the legend of figure 4.3 below) along the Atlantic coast, due to cheap land and good climate, and Doukala Abda (11 in the legend below). Open air cultivation of fresh tomatoes for the domestic market is primarily located in the lower Moulouya river basin (mostly irrigated land in the North Eastern region, 8 in the legend below), and along the Atlantic coast from Safi (11 in the legend below) to Temara-Skhirat (a coastal commune in the Rabat region, 10 in the legend below) (ONSSA, 2008).

Figure 4.3: Map of Morocco broken down by region
Source: Commission Consultative de la Régionalisation du royaume du Maroc
According to Grethe and Chemnitz (2005), the Moroccan tomato production chain for export is highly integrated and can be split into three steps: production, processing and export. There are three main organisational forms of this chain (Aloui; Kenny, 2004; Grethe, Chemnitz, 2005):

- **Integrated**: Various sized farmers organise themselves into cooperatives at the level of the packing station. Different cooperatives unite to form export groups. Producers join these cooperatives to increase their bargaining power. The packing stations are the most important source of information for producers, from technical services to packing. The exporting group has a logistical role including for example, transportation, and centralized purchasing of production inputs. This form covers 40 to 55% of production;
- **Semi-integrated**: Large enterprises with their own private packing stations process their own production and that of others. These producers are responsible for 35 to 40% of total early tomato exports;
- **Non-integrated exports** represent 10% of export of early tomatoes.

Clearly, the packing house is a key node in the chain and acts as the interface between the exporter and the farmer (Aloui, Kenny, 2004). Indeed, packing houses are the focal point for inspectors and certification programmes. As such, they have become the driving forces behind implementing standards pushing farmers downstream (particularly important in view of the fact that 70% of farmers are illiterate), and exporters upstream to adhere to regulations (Aloui, Kenny, 2004).

There are 200 packing houses country wide; some are public (usually the least modern), others are privately run (about 2/3 of the total), and others jointly owned (Aloui, Kenny, 2004). 10 export groups dominate the tomato trade. Each exporter must be licensed on an annual basis by the EACCE (the public export controlling body: Etablissement Autonome de Contrôle et de Coordination des Exportations) (Grethe, Chemnitz, 2005). Indeed, the growing complexity of the sector favours large integrated companies (Aloui, Kenny, 2004) and these structures are the key to Morocco’s success in the export of fresh tomatoes (Martinez, Poole, 2004).

While the system is bureaucratic, it is also well organised with a small number of players working with the EACCE for inspection and control. The working relationships are close:

‘Working relationship tend to be more personal as importers/exporters have been working together for a long time, facilitating a step change in the sector from a production-oriented to consumer led trading culture’ (Martinez, Poole, 2004: p. 246).

**Moroccan tomato exports to the EU**

The trade preferences enjoyed by Morocco in the case of tomatoes involve concessions on the EU’s EPS described in Chapter 2, such as seasonal or quantitative eliminations of ad valorem or specific duties. Under this system, Morocco (like Egypt and Israel, for a range of products covering tomatoes, cucumbers, oranges and clementines) enjoy lower tariffs for their F&V under the EPS than MFN tariffs which are seen as being prohibitive (Grethe, Chemnitz, 2005; Emlinger, Jacquet, Lozza, 2008). Preferences are negotiated bi-laterally on a product by product and seasonal basis (Emlinger, Jacquet, Lozza, 2008).
Figures vary each year, but the quota for Moroccan tomatoes allowed access to EU markets at preferential entry prices has varied between 150,767 tons in 2000 to 220,000 tons more recently - and the draft reciprocal agreement pending approval by the Moroccan and EU parliament foresees an annual quota of 233,000 tonnes for the marketing year 2011/2012 (Aloui, Kenny, 2004; Grethe, Chemnitz, 2005; European Commission, 2010). The preferential quota is broken down into months, and from October until May of each marketing year, Moroccan tomatoes within the given monthly quota have a preferential entry price, and are not subject to the ad valorem tariff. From June to September, Moroccan tomatoes are imported on the same basis as MFN tariffs (Grethe, Chemnitz, 2005). The results are given in the figure 4.4 below summarising the monthly EU imports of Moroccan tomatoes between 2004 and 2010 (only half the year is given for 2010).

![Figure 4.4: Monthly imports of Moroccan tomatoes by the EU](image)

Source: European Commission, 2010

As seen above, the biggest monthly quotas are between December and March. Licenses for exporters are given by the EACCE on a first come, first served basis. If Morocco stays within its quota, it is granted an additional quota (previously 10,000 tons, the pending draft reciprocal agreement foresees an additional quota of 28,000 tonnes) towards the end of the season (April/May). The allowed monthly quotas are summarised by the EACCE in table 4.1 below.

Tomatoes exported to the EU in excess of the quota are granted MFN status. However, should Morocco exceed its preferential quota by selling at MFN tariffs, its additional quota for preferential exports of the following year is reduced by 20,000 tons (Grethe, Chemnitz, 2005). In fact, in the 4 marketing years since 2007, the additional quota has been lost (EACCE, 2010).
Morocco is the only country in the world that can export tomatoes at a preferential price to the EU (Cioffi, Aquila, 2004). Morocco benefits from a preferential entry price of 46.1€/100kg between 1 October and 31 May, whereas the MFN entry prices vary between a trough of 52.6€/100 kg from 1 June to 30 September and a peak of 112.6€/100 kg in April (EACCE, 2010). This gives Morocco a competitive advantage over countries subject to the EU’s Entry Price System described earlier with Most Favoured Nation (MFN) tariffs (Emlinger, Jacquet, Lozza, 2008).

In view of the important share of tomatoes in agricultural production and trade in Morocco, this is an important asset. In 2002, tomatoes represented 11% of Moroccan export value and 27% of the value of preferential exports to the EU (Grethe, Chemnitz, 2005).

**Morocco’s comparative advantage in tomato production**

To establish the degree to which Morocco benefits from the entry price system compared with other exporters to the EU, the different price regimes are compared: MFN (which are applied to products from countries which do not benefit from any specific trade deal with the EU), preferential entry price enjoyed by Morocco, SIV for Moroccan tomatoes, Spanish whole sale prices (Grethe, Chemnitz, 2005; Grethe, Nolte, Tangermann, 2005).

If the SIV for Moroccan tomatoes is in between the MFN and the preferential entry price granted Morocco, the tomatoes are imported using the Export Preferential Quota (EPQ). If the SIV is below the preferential entry price, an additional duty is paid in line with the entry price system. Grethe and Chemnitz (2005) observe that in 58% of cases, the SIV is in between the MFN and the preferential entry price; in 13% of cases the SIV is smaller than the preferential entry price in which case an additional duty is paid; and in 29% of cases, the SIV is larger than the MFN in which case the preferential entry price is not relevant, as even the MFN is not restricting. In sum, in close to two-thirds of cases, it is the preferential entry price which allows entry of Moroccan tomatoes at a competitive price into the EU (Grethe, Chemnitz, 2005).

### Table 4.1: Monthly preferential quotas for EU imports of Moroccan tomatoes

<table>
<thead>
<tr>
<th>Contingents mensuels de base</th>
<th>Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octobre</td>
<td>10 600</td>
</tr>
<tr>
<td>Novembre</td>
<td>27 700</td>
</tr>
<tr>
<td>Décembre</td>
<td>31 300</td>
</tr>
<tr>
<td>Janvier</td>
<td>31 300</td>
</tr>
<tr>
<td>Février</td>
<td>31 300</td>
</tr>
<tr>
<td>Mars</td>
<td>31 300</td>
</tr>
<tr>
<td>Avril</td>
<td>16 500</td>
</tr>
<tr>
<td>Mai</td>
<td>5 000</td>
</tr>
<tr>
<td><strong>Contingent additionnel</strong></td>
<td>28000</td>
</tr>
<tr>
<td><strong>Contingent global</strong></td>
<td>213000</td>
</tr>
</tbody>
</table>

Source: EACCE, December 2010 actualité, monthly quota 2010/2011 marketing year
Between March and May, the SIV of Moroccan tomatoes tends to be below the MFN, in which case a prohibitive duty should usually be slapped onto the consignment making the product uncompetitive on EU markets. However, in the case of Morocco, this is not the case as it enjoys a lower preferential entry price. In fact, Cioffi and d’Aquila conclude that Morocco enjoys a 15% preference in October, and a 45% preference in March (Cioffi, Aquila, 2004), making the adherence to the quota so that the additional quota can be used during this time extremely attractive (Grethe, Chemnitz, 2005).

An unforeseen consequence of this system is that because of quality norms in the EU, not all greenhouse produced tomatoes are exported. It is estimated that up to 40% of greenhouse production is sold on the domestic market below production costs, at a price ranging from 0.14€ - 0.10€/kg. The loss varies according to the volume that is sold and domestic market prices. The given production costs for greenhouse tomatoes for export in Morocco are thus calculated bearing this loss in mind, making production costs 0.23€/kg without transport and processing costs (Grethe, Chemnitz, 2005).

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Thus, it would appear that Moroccan tomato production for export is affecting the domestic market. According to various estimates (Aloui, Kenny, 2004; Syngenta, 2011; FAO, 2011), annual Moroccan fresh tomato production is around 800.000 tons, of which roughly 342.000 tons are exported, leaving 460.000 tons on the domestic market. If, one assumes that the amount exported is in fact equal to 60% of total greenhouse production, this means that approximately 140.000 tons of greenhouse tomatoes are sold on the domestic market at a loss.

If the above figures are accurate, this implies that close to one quarter of domestic tomatoes are in fact rejects from greenhouse production destined for the EU market. Up to one quarter of the Moroccan domestic market share is thus made up of subsidised tomatoes as their loss is borne by inflated production costs. Moreover, one can assume that these greenhouse tomatoes initially foreseen for export, though not suitable for the EU market, must nonetheless be of fairly high quality. It seems safe to assume that this rejected production is having an effect on the domestic market by possibly keeping prices low and thus curbing the incentive to invest in tomato production for domestic consumption.

So, rather confusingly, the PTA enjoyed by Morocco both encourages and constrains Moroccan tomato production for domestic consumption and exports to the EU (Cioffi, Aquila, 2004). In sum, it would appear that the EPS has shaped the production (quality, quantity and production periods) of the Moroccan tomato sector as follows (Aloui and Kenny, 2004; Cioffi and d’Aquila, 2004):

■ Moroccan greenhouse producers exporting winter tomatoes for the EU market when EU production is low (and the SIV of Moroccan tomatoes is high),
■ Moroccan producers exporting premium tomatoes during the summer (when the SIV is high enough to avoid having the MTE slapped onto the consignment) which may one of the reasons behind the loss of the additional quota since 2007,
■ Open field tomato Moroccan producers producing lower quality for the domestic market during the summer season,
■ Keeping domestic prices of tomato production low.
V. Morocco’s capacity to adjust

The theory of comparative advantage can explain trade between different sectors and countries with different factor endowments or different levels of technology. On the other hand, the theory of monopolistic behaviour explains trade between similar sectors between countries with similar factor endowments. Thus, the nature of the trading relationship between two countries, will determine the consequences of a liberalisation of trade (Montanori, 2007).

Economic adjustments are fairly smooth in a monopolistic environment – however, it is the theory of comparative advantage (which entails significant adjustments) that better explains the trade patterns that would take place between the EU and Morocco should liberalisation occur. Liberalisation of trade between Morocco and the EU would provoke shifts between importing and exporting sectors so that a new equilibrium is reached based on the two countries’ comparative advantages. This shift entails costs (e.g. re-training and unemployment), as well as potentially providing new opportunities.

The type of shifts will be determined by the overriding force in each sector. Will the driving force be one of absorption by the rich country where its exports drop, and its imports increase; or will the driving force be that the rich country will be able to increase its exports thanks to its access to comparatively better technical capacities and infrastructure (Coque, 2006)? Based on the above description, we would intuitively assume that there would be several driving forces at the same time working in opposing directions – Morocco would increase its exports of F&V, in which it has a relative comparative advantage, to the EU, and the EU would increase its exports.

However, though it is generally agreed that the Moroccan tomato sector – whose main export market is the EU - is producing below capacity primarily because of limited access to EU markets (such as the calendar, the entry price, and the monthly quota) (Akesbi, 2007), a mere increase in the access to its key trading partner’s markets (the EU) is not a sufficient condition for economic development. As reviewed in the above text, there are several factors that would affect Morocco’s capacity to adjust to liberalisation:

- Non tariff barriers that refer to factors beyond formal tariffs,
- The characteristics of a country where poverty is a primarily rural phenomenon,
- Domestic policies that govern the behaviour of institutions and chain of actors involved in a given product, and the quality of the said product,
- The characteristics of the tomato chain,
- Environmental constraints.

Each point will be addressed in the sections below.

Farm typologies and transition

Currently, 75% of Morocco’s UAA is used for cereals, which contribute 19% to GDP. On the other hand, F&V cover only 3% of UAA, and contribute 13% of the GDP (Ministry of Agriculture, 2010). This implies a huge capacity for reconversion to higher added value agriculture.

However, Morocco has a particularly heterogeneous topography. 78 percent of its land mass is in dry/desert areas, 15 percent in the semi-arid, and 7 percent in sub-humid and humid. Thus, though
there may be a potential for reconversion, the adaptability of the agro-ecological zones to different products is limited (FAO, 2003).

Various sources tend to split Morocco up into about 5 main agro-ecological zones. The zones identified by the FAO are shown in the map in figure 5.1 below and include dryland mixed zones along the northern and western coasts, a rainfed mixed zone in the north west, a highland zone inland, and pastoral and sparse zones to the South (FAO, 2001). These are roughly similar to the zones identified in the 2030 strategy (HCP, 2004), but which are not mapped. In fact, it has been difficult to correlate the existing information which is either based on agro-ecological zones which vary according to institution, or based on different administrative boundaries.

To summarise the information found which could be correlated, the sparse/arid zones make up 60% of the territory. In the sparse and arid regions, poverty varies between 17 and 35% (Lanjouw, 2004) and UAA is insignificant (HCP, 2004).

The second most important zone is that of highlands which covers approximately 38% of the entire country. In fact, the favourable region (approximately equivalent to the rain fed mixed zone in the map overleaf) only covers 13.5% of Morocco (HCP, 2004). In terms of farming households, only 25% of farms are located in the favourable agro-ecological zone. The remaining three-quarters of farms are located in relatively difficult agro-ecological zones, with, 30% of farms located in the highlands, and 38% in arid areas (HCP, 2004).

According to the FAO typologies, the Highland Mixed Farming System in Morocco tends to include two subsystems; one dominated by rainfed cereal production (approximately 12% of cereal production in Morocco) and legumes plus tree crops (fruits and olives) on terraces, while the second is based on livestock (mostly sheep) on communally managed lands. Poverty is extensive (between 17 and 35% in the centre – Lanjouw, 2004), as markets are often distant, infrastructure is poorly developed and the degradation of natural resources is a serious problem.

The rainfed mixed zone, or the favourable region is the wettest in Morocco and responsible for approximately 42% of cereal production. Poverty is moderate, but would be higher without extensive off-farm income from seasonal labour migration. This area, and that stretching into the dryland mixed area are the regions where the bulk of tomato production is located, but where the risk of drought tends to be high (FAO, 2001).
Figure 5.1: The Major farming systems in the Middle East and North Africa

Source: FAO farming systems, 2001
Thus, in addition to the role of physical constraints of Morocco’s territory in its transition process, is the duality of Morocco’s agricultural sector. Morocco’s two-speed agricultural sector is visible in the fact that 75% of agricultural exports (80% of which are F&V) originate from irrigated land (IFPRI, 2007). On the other hand, traditional (mostly rain-fed) agriculture in least favoured areas (mountainous regions, oasis) covers 80% of the UAA.

The Moroccan policy of border protection and consumer subsidies to support products in which Morocco has a comparative disadvantage (cereals and livestock) may appear paradoxical—especially when one considers that cereals are now Morocco’s main import, and that its domestic production remains unpredictable, and inefficient (Femise, 2003; IFPRI, 2007). However, ‘these productions are vital for these [Mediterranean] countries to the extent that they settle rural populations and allow significant self-consumption alimentation.’ (…); but, ‘The effect was twofold, namely to limit production capacities due to very low prices and to develop rural self-consumption.’ (p.2: 2003, Femise). It is these very factors have been at the heart of the reluctance of liberalise agriculture on the part of the Moroccan authorities, as they are all too aware that the most heavily protected sector (cereals), provides the bulk of income for the rural poor, who have limited mobility to shift their livelihoods to other sectors (Logfren, 1999).

The cereal and livestock producers who will lose in the event of liberalisation, are traditional farmers, on very small, under equipped farms (three out of four farms are less than 1ha), with insecure land tenure (and thus limited access to credit), and debt. The results are farms with low productivity, that rely on family labour, and that are either subsistence or semi-substinance farmers (Femise, 2003; IFPRI, 2007). Even those farms that are subsistence oriented will be affected in that the entire economic and social fabric of rural areas could be negatively affected following liberalisation (Femise, 2003; Coque, 2007).

The differing levels of productivity, social and economic weights of the key agricultural sectors are visible in the figure below which clearly highlights the dominance of cereals in terms of UAA, of F&V in exports, and of livestock in labour. Many of the rural poor rely on both the crop and livestock sectors for their livelihoods (Femise, 2003; Philippidis and Sanjuan, 2006; IFPRI, 2007). Thus, agricultural liberalisation will have grave consequences in terms of labour, food security, and rural development.

Figure 5.2: The relative weights of cereals, F&V, and livestock production in Morocco
Source: Ministry of Agriculture, Plan Vert 2009
In fact, Morocco has already carried out extensive research on the role of agriculture and its possibilities within the given environmental constraints of Morocco. To guide its development and donor efforts, Morocco’s Haut Commissariat au Plan (HCP – the principle institution producer of social, demographic and economic statistical data, including the household surveys mentioned in Chapter 3) has published a report entitled ‘Prospective Maroc 2030’ (2004). The report endeavours to present different perspectives about the future of Morocco based on different scenarios. The report leans heavily in favour of one scenario and basically serves to present a vision that will guide relevant national actors along Morocco’s chosen path of development. The 3 given scenarios are i) a sudden liberalisation; ii) rapid liberalisation with complementary social net programmes; iii) a new agricultural and rural development deal with a controlled liberalisation (the favourite) (HCP, 2004).

In recognition of the social and economic weight of agriculture, and of its role as an environmental actor, the 3rd and favoured scenario (in line with the vision of European agriculture) promotes the multi-functionality of agriculture:

‘It [agriculture] corresponds to a political vision in which agriculture is not only a competitive source of commercial products, but also a source of labour, a form of natural resource management, and a catalyst in landscape management and rural development’ (free translation - p.65 :2004, HCP)

In line with this vision, 2008 saw the launch of the ‘Plan Maroc Vert’ - a national development strategy driven by agriculture. Designed according to the two speeds of this sector, the plan is based on a two pronged strategy. The first, led by the private sector, is to stimulate the development of added value agriculture in irrigated and favourable zones; the second, led by the public sector, is to support what is referred to as an ‘agriculture of solidarity’ which fosters small holder agriculture and an integrated approach to rural development as a tool to alleviate rural poverty in less favoured areas (Ministry of Agriculture, 2011). The plan has been the backbone of a series of political and institutional reforms, namely the creation of the ONSSA mentioned earlier, and the creation of a second implementing body, the ADA (Agence de Développement Agricole, 2011) responsible for the promotion of productivity and value added to agriculture (Ministry of Agriculture, 2011).

Similarly to the FAO categorisation of farming systems and respective livelihoods recommendations (the FAO propose 5 key strategies for farming households to reduce their poverty: intensification, diversification, increased farm size, increased off farm income, exit from agriculture), the second pillar of the plan ‘Maroc Vert’ aims to reach between 3 million poor people living in rural areas by targeting between 600 and 800,000 farms. Amongst other things, the strategy to improve the livelihoods of rural people under this second pillar include the reconversion (of between 30 and 40,000 farming households), intensification (of approximately 1.2 million people), and diversification (approximately 300,000 farming households) (Ministry of agriculture, 2011).

In fact, most farming households will most likely follow several of these strategies at the same time depending on their existing or improved future access to certain assets, such as financial capital, physical capital, social capital, human capital, natural capital, and their scope for manoeuvre within their external environment (policies, institutions, seasons, and other external factors) (Ellis, 2000). However, how individual HH will chose to adjust is, at the end of the day, unknown (Winters, 2005).

Indicators of the plan Maroc Vert show that policy makers are working to engineer a drop of 22% in the UAA of cereals, with a concomitant increase of 45% of production by 2020. On the other hand,
policy makers are striving to increase the UAA of F&V by a massive 76%, and to increase production by 280% by 2020 (Ministère de l'agriculture et de la pêche maritime, 2009).

The anticipated effects of liberalisation, its potential to exacerbate rural and urban poverty and its associated shifts from cereal to F&V farming are thus being managed and monitored by the relevant Moroccan authorities. However, in reality can the people who will be reconverted or diversified away from cereal farming and livestock be absorbed by the tomato chain?

**Capacity of the tomato chain to expand**

It is generally agreed that the Moroccan tomato sector – whose main export market is the EU - is producing below capacity primarily because of limited access to EU markets (such as the calendar, the entry price, and the monthly quota) (Akesbi, 2007), and possibly because of quality standards (Akesbi, 2007). Accordingly, this section will be split in two. It will begin with a review of the role of non-tariff barriers, and whether these affect Morocco’s capacity as a player on international markets, and continue with a review of other factors that have resulted from the above discussion that could affect the potential of the Moroccan tomato chain to act as a counter balance to the negative effects of liberalisation.

**Non-tariff barriers: public and private quality standards**

As reviewed in Chapter 3, there are formal and non formal barriers to trade in both the EU and Morocco. As a reminder, non-tariff barriers affecting trade flows have been summarised as:

- The degree of common history and language,
- Distance (especially for perishable products, the transport of which is more expensive),
- Adaptation to norms; all of which ultimately affect:
- Information and logistics costs.

In the case of Morocco, common history is a definite advantage, as it has a long history with its key EU trading partner (France). On the other hand, proximity to the market can be considered from two points of view. From one point of view, Morocco is very close to its EU market (which is mostly concentrated in France); however, if taken from the point of its main competitor which is Spain, Morocco is at a relative disadvantage (Akesbi, 2006). This brings us to the point of norms and quality standards which are frequently cited by the reviewed literature as barriers to trade. This section will describe the non-tariff barriers in accessing the EU market, and the extent to which these act as barriers to trade flows of Moroccan tomatoes.

As the EU gradually opens up its agricultural markets by reducing its trade barriers, Non-Tariff Barriers (NTBs) have grown in response (Femise, 2003; Aloui, Kenny, 2004). In spite of this, the globalisation of food production and consumption has made it increasingly difficult for governments to control the quality of their food supply chain. The trend has thus seen a shift of responsibility from the public to the private sector resulting in an interaction of self-regulation and public regulation in EU (and other) markets (Martinez, Poole, 2004).

Currently, there are different quality control standards in the EU depending on the chain level (e.g. farm or packaging). These standards can either be compulsory public legislative standards, or a range of private standards originating with retailers; for example (Aloui, Kenny, 2004):
International: HACCP (Hazard Analysis and Critical Control Points) and ISO (International Standards Organisation),
Private EU standards: Organic,
Private retail standards: EUREPGAP, BRC (British Retail Consortium).

With growing globalisation and international competition, there is an erosion of differences between compulsory public standards (which have to be approved by the WTO) and private standards (Aloui, Kenny, 2004; Martinez, Poole, 2004). For example, EUREPGAP (private) has become a pre-condition for accessing the EU market, and BRC (British Retail Consortium, private) has become a pre-condition for accessing the UK market (Aloui, Kenny, 2004).

The growth of NTBs means that exporting food to the EU has become a high information content activity (Aloui, Kenny, 2004). This is especially true for fresh F&V which is particularly perishable and vulnerable to disease and damage, both pre and post harvest. As such high food safety requirements including particular handling and quality assurance are required throughout the chain (Martinez, Poole, 2004).

However, as mentioned in Chapter 3, the ability to respond to such quality standards tends to be correlated with GDP levels – the richer a country is, the easier it is for it to develop the appropriate quality infrastructure. In the case of Morocco, adherence to NTB’s has sometime been difficult. For example, the EU and private regulations concerning pesticides sometimes refer to products which are not known by the farmer, or not registered under exactly the same name in Morocco. Moroccan registration of pesticides also tends to be slow, meaning that the Moroccan pesticide market lags behind the EU market. This can result in Moroccan farmers sometimes using as yet unregistered (thus illegal) pesticides. The fact that there is sometimes no parallel substance between the EU and its partner trading countries is compounded by the fact that destination countries have different registrations, and what is allowed in one country (the EU), is not necessarily allowed in another (the US) (Aloui, Kenny, 2004; Martinez, Poole, 2004).

However, the importance of EU markets and within these, the growing weight of retailers (80% of F&V in the EU are sold by retailers), means that retailers can impose product specification down the chain (Agritrade, 2009). The trouble from a producer point of view is that different buyers request different management and quality systems (Martinez, Poole, 2004).

As picked up by the quantitative models in Chapter 3, these product specifications have acted as non-tariff barriers to Moroccan exports of F&V. In 2004, only one packing house in Agadir had obtained the BRC certification (Aloui, Kenny, 2004). At that time there was no national Moroccan institution facilitating compliance between EU markets and Moroccan producers, and Moroccan chain actors were having to pay for European certification bodies to verify their standards, making the process costly (Aloui, Kenny, 2004). Indeed, the cost of applying the certification was frequently seen as a constraint for Moroccan farmers, especially small to medium sized farmers who represent 40% of export supplies (Aloui, Kenny, 2004).

However, since then the situation has significantly evolved. The 2005 Euro-Mediterranean roadmap on agriculture already mentioned (though vaguely) that the existence of non-tariff barriers should be ‘(...)addressed in order to eliminate unjustified trade barriers.’ (p.2: 2004, Draft Euro-Mediterranean Roadmap for Agriculture). This is followed up in more detail in the draft agreement
on reciprocal liberalisation (pending approval by the Moroccan and EU parliaments), which concretely mentions that Sanitary and Phyto-sanitary (SPS) measures, approximation of technical standards and harmonisation of legislation, and the protection of geographical indications should be integrated into negotiation processes between the EU and MPCs (Explanatory memorandum, 16/09/2010). As such, the EC has committed itself to providing technical assistance in SPS, supporting the development of quality and certified production, and facilitating export by providing structural, institutional, legal and administrative support (Draft Euro-Mediterranean Roadmap for Agriculture, 2004).

Nationally, Morocco has recently made significant efforts in upgrading the institutional set-up governing agriculture. The alignment of Morocco’s laws concerning SPS standards along those of the EU are ongoing; national procedures governing traceability in packaging and processing were drafted in 2005; 2010 saw the signing of a law concerning food safety based on existing EU legislation in this sector, the establishment of ONSSA (Office National de Sécurité Sanitaire des Aliments), and the creation of a national committee responsible for the development of policies governing SPS measures and their implementation (EC country report Morocco, 2011).

Examples of tangible results are the EACCE review of all exporters in line with HACCP (113 were considered eligible); the audit of exporters and packing centres in line with the national quality management system (36 organisations certified – of which 9 for fresh F&V in the Souss Massa) (EACCE, 2010); the establishment of EACCE laboratories in the North West, and the Agadir region (of which some are internationally recognised by for example COFRAC, a French certification body), which are part of an international network of laboratories used to compare results. It is hoped to have all the EACCE laboratories ISO certified in 2011 (EACCE, 2011), and to have 120 companies certified under the national quality system by 2012 (EACCE, 2010).

Overall the evolving picture in fresh F&V production within this context is that of increasingly vertical relationships between firms. Chain actors are seeing the benefits of cooperation with each other as investments are required in their supply chains to protect their market share in a particular product (Martinez, Poole, 2004). In other words, competition between firms is being replaced by competition between supply chains (Martinez, Poole, 2004).

In sum, though growing quality demands would have acted as trade barriers in the past (Coque, 2007), chain actors and the public sector are adapting to these. Indeed, it is generally acknowledged that though the EU –Morocco Association agreement and associated PTA provide a competitive edge to Moroccan tomatoes on the EU market, Morocco does in fact have the capacity to produce competitively outside of this policy driven comparative advantage, and that in reality the agreement also constrains the flow of tomato exports between it and the EU (Cioffi, Aquila, 2004; Emlinger, Jacquet, Lozza, 2008).

**Other factors**

Players in the Moroccan chain interviewed for an AGPOL study estimated that the chain had the capacity to double the volume of tomato exports to the EU from the current 200.000 tonnes/year to approximately 450.000 tonnes per year should market access to the EU be liberalised (Akesbi, 2007).

From an absorption point of view, current EU F&V trade remains dominated by intra-EU trade. In other words, EU countries are their own market (87.5% export market intra-EU) and own main
suppliers (70% of intra-EU imports) of F&V (Emlinger, Jacquet, Lozza, 2008). Figure 5.3 below clearly demonstrates that not only is there is scope for increased imports, but that an increase to 450,000 tonnes per year is unlikely to provoke major upheavals in the EU’s tomato chain.

Figure 5.3: Some figures in EU F&V production, imports and exports – 2001/2002

Source: Own elaboration from ‘The horticulture sector in the EU’, EC DG for Agriculture, 2003

In addition to a growth of volume to its main export market (the EU), the Moroccan tomato chain has the capacity to diversify its product line (to for example cherry tomatoes) and to diversify its export markets outside of EU markets, such as Russia, North America, and the Middle East (Akesbi, 2007). AGPOL cites the further opportunity of the assessment that Spanish tomato production (Morocco’s main competitor) was stagnating; however, this was countered by increased competition from Turkey and Egypt (Akesbi, 2007).

The capacity of expansion of the tomato production chain in Morocco is of particular interest in the liberalisation scenario as, compared with cereal production, it is relatively labour intensive (Philippidis and Sanjuan, 2006). Whereas cereals only require approximately 10 labour days per ha, tomatoes require 250 per ha (and citrus 50 days/ha) (Aloui, 2004). Given the high concentration of unskilled labour that would be displaced from cereal and livestock production, and small farming households reliance on unskilled labour as a major income stream, the expansion of demand for unskilled labour through the increase in tomato production would provide real gains to the rural poor (Philippidis and Sanjuan, 2006).

However, Morocco is characterised by bureaucratic hurdles which hamper its flexibility to adapt (IFPRI 2007). An indicator of the flexibility (or lack thereof) of the tomato export sector is that despite the significant rent received by the sector, the rise of new exporters and producers is rare. One obstacle is the water policy in Souss Moussa (the main tomato producing region for export) which prevents the appearance of new farms (Aloui, Kenny, 2004; Grethe, Chemnitz, 2005). Water is a seriously limiting factor (Femise, 2003; Akesbi, 2006; IFPRI, 2007) the management of which would be the topic for an entirely new paper. Suffice to say at this juncture that a water policy that promotes an adequate reflection of the scarcity and price of the resource is required, and that this
would likely result in the promotion of the production of Mediterranean rather than temperate products (Femise, 2003).

Moreover, the current differences in the costs of production between EU tomatoes (as plotted in figure 5.4 below), and Moroccan tomatoes (production costs 0.23€/kg without transport and processing costs) is such, that should a water pricing policy be implemented, tomato production would remain profitable.

![Figure 5.4: Cost of production of the round tomato in key European markets](image)

Source: European Commission, 2010

One could speculate that another possible obstacle to the rise of new players within the tomato chain is the fact that the tomato export sector is a network of close knit actors which may not be open to expanding its members. As the tomato sector has evolved, so have its entry barriers which are currently high from a financial, informational and social point of view (Martinez, Poole, 2004). To access the chain, producers must either join a coop, or a packing house; similarly, exporters must be registered with the EACCE on an annual basis, and existing chain actors have had to invest in their relationships downstream and upstream. While liberalisation may in theory open up the sector as the tight control of exports is no longer required if there are no more quota’s, existing chain actors may resist this shift as they may lose certain advantages as a consequence. In other words, the cartel like environment may imply high social entry barriers.

In addition, even if producers were able to enter the export tomato market, for this to be successful, other chain actors must also be able to respond rapidly to the new market opportunities and ensure that the expanded production reaches the market (packaging, logistics, phyto-sanitary support) (IFPRI 2007). Yet Morocco (and in fact North African countries in general) is a highly bureaucratic environment that is not seen as flexible or business friendly (IFPRI, 2007). Opening a business is a lengthy process, and the operating environment is littered with institutional hurdles across a range of different ministries.
Following on from the previous section, there are also issues concerning the capacity of transition of the farmers who will lose under a liberalisation scenario. These farmers tend to be illiterate, in addition to which they have been farming in low technology settings across the country which is characterised by very different agro-ecological zones (FAO, 2001; Femise, 2003; HCP, 2004). This will affect the mobility of labour as it may be difficult for farmers used to arid zones and traditional farming to obtain employment in irrigated and modern farms. This will also affect the ability of farms in certain areas to switch products (Femise, 2003).

Compounding this, and despite recent efforts including those outlined in the plan Maroc vert, is an agricultural sector that suffers from underfunding. It is estimated that currently, 15% of Moroccan farmers have access to credit. Those receiving credit tend to be modern farms, producing high added value crops on irrigated land (Abdelhakim, Bessaoud, Dolle, 2011). But the reality remains, that in least favoured areas, small farms are insolvent in a non-protected policy environment and are ill equipped to transition into a new and modern production chain (Abdelhakim, Bessaoud, Dolle, 2011).

VI. Conclusion

The costs and benefits that will accrue to the EU following agricultural liberalisation with Morocco are in fact marginal (though EU consumers would benefit from cheap F&V), due to the weak position of Morocco in EU trade, and the relatively small weight of F&V farmers in the overall EU economy.

The benefits that will accrue to Morocco are complex. Generally speaking, the results of quantitative models present the existence of aggregate gains. But, though there are benefits overall, these are composed of welfare increases for some, and welfare decreases for others. The studies tend to make little of the losers, and the associated costs. However, these will have serious implications and represent upheavals in the lives of many, most of who are already poor, with limited assets, skills and mobility.

Moreover, the WTO has categorised Morocco as a net food importing country, implying that it is vulnerable to the effects of implementing free trade in agriculture as it has a history of having experienced difficulties in financing food imports – the bulk of which are wheat (IFPRI, 2007). This is indeed a toxic mix, when one takes into account that not only do the bulk of the poor in Morocco depend on agriculture for their livelihood and sustenance, that these means are likely to be taken away from them following liberalisation, but that Morocco’s revenue (10% of which stems from tariffs on imports) will also be seriously diminished following liberalisation, meaning less resources with which to finance safety nets for the losers of liberalisation, and less ability to stabilise the farmgate price of cereals (IFPRI, 2007).

In addition, Morocco will be faced by several different challenges at the same time that will require careful management to ensure that Morocco does not lose its F&V market share in the EU, let alone be able to increase it:

- An erosion of its preferences under ongoing multi-lateral liberalisation which currently give it a significant preference margin over other exporting countries,
- Increasing year round production of tomatoes in Northern Europe,
- Increasing pressure of consumer protection and quality standards – i.e. NTB,
Concentration of distribution of F&V in OECD countries,
EU enlargement (e.g. to Turkey),
Water scarcity.

Though the BP and the associated free trade agreements have been cited as being of primarily political interest for the EU, used to further certain narrow economic interests while promoting stability in the region (Kuiper, Dell ‘Aguila, 2004), the recent events of the past few months in North Africa have highlighted the importance of in depth support to the alleviation of structural poverty. Indeed, ‘Agriculture is a source of jobs and income in rural areas and an essential factor in revitalising the rural economy, which has a vital role to play in consolidating the transition now underway in the South and East of the Mediterranean.’ (p.4: 2011, Abdelhakim, Bessaoud, Dolle).

In this scenario, and in line with the national agenda promoting agriculture as the driver of national economic development, the EU has an important role to play as both a trading partner, and a donor.

**EU policy coherence**

The above research shows that despite the competitiveness of F&V in Morocco, market access is not sufficient to guarantee success in the transition to liberalisation (EC workshop, 2006). Liberalisation must be asymmetrical and come with a package of policies to allow opportunities to be grasped and for negative repercussions (social, environmental) to be managed.

In general, the relevant EC bodies accept the role of the EU in this partnership. What was previously known as DG Relex (the European Commission directorate responsible for external affairs – now EEAS since 2010 – under which DG Development worked) recognises the importance of agriculture, implying that the EU and Morocco must weigh up complementary versus competitive production systems; trade versus migration; continental versus Mediterranean products; and sustainability of production. DG Trade acknowledges the need to further liberalise raw and processed agricultural products, including the need to take non-trade issues into account. However, beyond EU-Morocco trade integration, DG Trade also touts the importance of regional integration as a driver of economic development, which remains under-developed. DG Agriculture underlines the nexus of issues encompassed by agricultural trade relations, and the importance of ensuring that the rural poor in Morocco or producers in European Mediterranean countries are not forgotten (EC workshop, 2006).

So, though in theory, the different bodies of the European Union would seem to acknowledge both the complexity and the potential of trade led development, the problem is that the facts do not necessarily determine the correct policy (Wilkinson and Eidinow, 2008) – neither in the complex decision making processes of the political economy of the EU, nor in Morocco. Indeed, trade agreements are frequently motivated by political rather than economic factors (Kuiper and Del Aquila, 2004; IFPRI, 2007). From the EU’s point of view, this has been proven by various models which highlight the limited economic benefits the EU stands to gain from full liberalisation (including agricultural) with Morocco. Indeed, the politics rather than the economics of the partnership would explain the initially narrow scope of the Barcelona process and its limited results.

The attitude in the EU can be summarised as a tug of war between Northern European countries, and Southern European countries. In terms of development assistance, the Southern EU countries call for greater financing and engagement, whereas, Northern European countries (net contributors to the EC budget) call for funding that is increasingly linked to conditionality’s (Europolitics, 2011).
From a trade point of view, EU Member states with primarily import competing sectors (e.g. F&V) will tend to be against liberalisation (Southern European countries), whereas EU Member States with primarily export oriented sectors (e.g. manufacturing) will tend to be pro-liberalisation (Northern Europe) (Kuiper and Dell Aquila, 2004; Montanori, 2007).

The above tug of war is somewhat counter intuitive, with progress in aid and trade levels becoming inextricably tied up in the negotiations between the EU and Morocco. Indeed, aid is seen as important in supporting Morocco in re-structuring its economy, as well as a source of compensation for lost tariff revenues following the dismantling of tariff barriers. In sum, aid can act as an incentive towards liberalisation (Montanori, 2007). However, the European North/South tug of war, and the importance of its different interest groups (namely the agricultural lobby) is reflected by the nature of the EU-Morocco association agreement which focused on the liberalisation of manufacturing, while maintaining a long transition period towards agricultural liberalisation (with no firm schedule fixed) compensated for by preferential market access for some key agricultural products (Kuiper and Dell Aquila, 2004; Montanori, 2007).

However, as mentioned earlier, the consequences of reactive rather than proactive agricultural policies in a context of climate change, demographic growth, and globalisation carry grave consequences of a regional nature. Thus, the EU has a stake in a well managed path to liberalisation in agriculture in Morocco. In fact, the preferred liberalisation path will require support from the EU, in both the negotiating process with Morocco, and in adapting its external assistance so as to best respond to Morocco’s needs – especially in view of the decreased revenue of the Moroccan state post liberalisation, and in view of the fact that those most affected by liberalisation will be the poor in rural areas who already suffer from a history of underfunding (Femise, 2003; HCP, 2004).

Currently, EU cooperation to Morocco is mostly delivered through direct financial support to the general budget of Morocco to support national sector reforms. Thus, though not obviously categorised as funding going to rural development in the EC’s reporting, this funding nonetheless supports the development of poor rural communities in Morocco. Currently ongoing examples of such programmes are support to education (93 million EUR), literacy (27 million EUR), health (86 Million EUR) and gender equality (35 million EUR) (EC geographical coordination for Morocco, 2011).

In addition to indirect funding to rural development, the EC funds ongoing programmes which are specifically categorised as rural development. These are (EC geographical coordination for Morocco, 2011):

- **Budget Support:** Support to the national plan for rural roads, phase II (55 million EUR - started in 2010). The programme supports national plans for opening up roads in isolated parts of the country, with special attention to social indicators and reinforcement of local authorities’ road management capacities;

- **Budget Support:** Support to "Plan Maroc Vert" (70 million EUR - started in 2010). The programme supports the second pillar of the Plan Maroc Vert by promoting the development of small rural production units, with a special focus on lowering the environmental impact of agriculture;

- **Project:** Support to integrated development in rural Northern provinces (19 million EUR - to start in 2011). The project supports integrated rural development of remote communities of the Al Hoceima region.
While there is recognition of poverty as a rural phenomenon in the above targeting of EU funding, there is no obvious EU funding to support trade facilitation efforts. Yet promoting (via assistance in quality, logistics, packaging, and asymmetrical liberalisation) increased access to export markets in the EU in addition to the complementary external assistance such as that given above would be a show case of true trade led economic development. Indeed, ‘Such a scenario (…) considers agricultural trade liberalisation not as an end in itself, but as an essential instrument of the Euro-Mediterranean Partnership that would make the EU-Med region a zone of peace and prosperity’ (p. 22: 2003, Femise).

**Indicators, and recommendations**

In view of the discrepancies in the findings of quantitative modelling, the difficulty and uncertainty of social change, and external forces (such as globalisation, liberalisation, climate change, demography) it may be more useful to determine a series of indicators to be achieved within a given time frame, and develop flexible pathways to reach them. Resilience and capacity to adapt to changing conditions (such as increasing fuel prices, increasing food prices, and climate change) should be the aspects that govern the choice of path.

Some examples of such indicators are already given in the ‘Perspective Maroc 2030’ (2004) which takes a holistic approach to agriculture and development in Morocco. These are:

- Increase of non-agricultural GDP by x%,
- Increase in agricultural productivity by x%,
- Decrease in agricultural population of rural areas by x%,
- Decreasing loss of peri-urban arable land by x%,
- 30% of UAA used for certified production,
- Increase of family run businesses by x%,
- X number of people employed in agriculture per cubic metre of irrigated water,
- The added value per cubic metre increased by x% by 2030,
- Rural exodus does not go beyond x%,
- X% of the population remains and makes a living on least favoured land,
- X% increase in rural tourism,
- X% increase in the production of F&V,
- X% decrease in the production of cereals,
- X new food chains are created (e.g. mandarins to the USA),
- Modern irrigation of UAA increases by x%,
- Increase in roads and rural electrification by x%,
- Reduction of illiteracy by x%.

Based on the literature review, and weaknesses previously identified, the following recommendations seem both feasible, relevant and in line with Morocco’s WTO membership. The recommendations target different bodies, and most would be best achieved through a blend of private and public efforts – if possible spanning Morocco and the EU.
Though useful now, some recommendations would likely only be fully implemented when liberalisation in agriculture becomes a concrete and foreseeable reality. Other recommendations could be implemented unilaterally by Morocco outside of an immediate liberalisation agenda.

In line with the FAO, and national policy documents, the recommendations target only a couple of strategies: i) to help some farmers out of farming, ii) to help some farmers transition into different farming; iii) to allow the identified ‘winning’ sectors to expand:

- **Updating Morocco’s institutional set-up regarding food safety:**
  - Ensure coordination between the ONSSA and other relevant public and private institutions,
  - Faster registration of pesticides and other inputs,
  - Continue the development of internationally recognised testing facilities,
  - Develop national regulation at least equal to compulsory EU standards,
  - Continue to develop internationally recognised accreditation bodies.

- **Trade facilitation:**
  - Commit to a concrete timetable for EU-Morocco agricultural liberalisation to provide real incentives to reform and progress in both Morocco and EU member states,
  - Develop approaches to differentiate the Morocco-EU trading relationship from other trading relationships the EU has in the region,
  - Develop public infrastructure such as roads, ports, and storage facilities adapted to demands of F&V,
  - Streamline Moroccan bureaucracy involved in import and export,
  - Consider approaches in the EU to encourage the retail sector to streamline quality standards,
  - Design EU technical assistance targeting relevant Moroccan institutions on the required reforms and developments in quality and food safety that would facilitate trade in tomatoes,
  - Monitor the development of non-tariff barriers (such as quality standards) in the EU,
  - Diversification of Morocco’s export markets,
  - Demand led support to trade fairs in Morocco.

- **Support the Moroccan tomato chain:**
  - Increase Moroccan support to R&D in developing new seed varieties (for example the cherry tomato) and smart farming techniques,
  - Support domestic and international market studies,
  - Support risk management in Morocco,
  - Support packing houses with technical assistance in improved logistics, packaging, traceability and labelling systems that can easily align themselves with that of Morocco’s key export markets,
  - Moroccan capacity is linked to water availability, and Souss Massa (the main tomato producing area) already has an important annual water deficit. Develop water management policies that adequately reflect social and environmental costs and allow sustainable economic development of the sector,
Organise Moroccan producers in groups to concentrate demand, dissemination of knowhow and information, and to concentrate the supply of products,

- Expand production zones in Morocco.

Ease transition by creating supporting structures for Moroccan farmers transiting from protected sectors (cereals, livestock) to competitive advantage sectors (e.g. tomato production):

- Demand led training of Moroccan farmers on use of modern farming techniques (especially important in view of inefficiency of wheat production sector and high levels of illiteracy of farmers),
- Support the development of local markets in Moroccan rural areas that are integrated into the local rural fabric,
- Demand led training on the demands of Moroccan production for the export sector,
- Demand led financial support to comply with the demands of producing for export,
- Relax the power of the EACCE on the tomato sector by adapting EACCE licensing requirements.

Further research:

- Invest in continued research on farming systems and farm typologies in Morocco for a continuously accurate targeting of policy measures to a shifting environment,
- Develop multidisciplinary research, monitoring and extension teams to ensure contacts and services are tailored to the both the agro-environmental and socio-economic realities of different farming situations,
- On the basis of the above, develop user-friendly mapping for multi-disciplinary use across central, regional and local authorities regarding agro-environmental zones, population, poverty and provincial/regional boundaries to allow for farming diagnostics which can be budgeted, implemented and monitored according to location specific indicators of progress taken from the above list.
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