Agri-food Turkish trade: structure, competitiveness and relations with the EU[1]

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Abstract

The important role of the agri-food sector in the Turkish economic system and the geographical position of the country offer good opportunities to access large markets such as Europe, the Middle East and North Africa. The purpose of this study is to analyse structure and competitiveness of Turkish trade, particularly trade relations in agri-food products that have ensured a strong link between Turkey and the EU for some time. Analytical indices have been used to assess the competitiveness of Turkey's international trade in terms of the structure of supply and in terms of the external macroeconomic environment.

The competitiveness analysis of agri-food trade flows, with particular reference to the EU, shows that Turkey has a low level of sector specialisation, and a comparative advantage in only five of the sectors under consideration (fruit, preparations of vegetables and fruit, vegetables, olive oil and preparations of meat and fish). Analysis of intra-industry specialisation for Turkey's agri-food trade shows significantly high values for various products and an increase in the indicators for nearly all the sectors in question. This analysis gives an outline of how relations might be developed in the near future as a result of the new impulse given to the recent agreements and Euro-Mediterranean partnership, as well as Turkey's prospective membership of the EU.

Résumé

Le rôle important du secteur agroalimentaire dans le système économique turc et la position géographique du pays, offrent de bonnes opportunités d'accès aux grands marchés de l'Europe, du Moyen Orient et de l'Afrique du nord. Le but de cette étude est d'analyser la structure et la compétitivité du commerce turc, notamment les relations commerciales pour les produits agroalimentaires qui, pendant un certain temps, ont assuré une forte liaison entre la Turquie et l'Union européenne. On a utilisé les indices analytiques pour évaluer la compétitivité du commerce international turc en termes de structure de l'offre et de milieu macro-économique externe.

L'analyse de la compétitivité des flux du commerce agroalimentaire, se référant notamment à l'Union européenne, montre que la Turquie a un faible niveau de spécialisation sectorielle, et un avantage comparatif seulement en cinq des secteurs considérés (fruits, préparations de fruits et légumes, légumes, huile d'olive et préparations de viande et poisson). Cette analyse décrit comment les relations pourraient se développer dans l'avenir prochain suite à la nouvelle impulsion donnée par les récents accords et le partenariat euro-méditerranéen, ainsi que la perspective d'adhésion de la Turquie à l'Union européenne.

1. Introduction

The agri-food sector in Turkey plays an important role in the country's economic system. In 2001 36% of the total workforce was employed in the primary sector, with agriculture accounting for 13.6% of GDP. The role of the food processing industry is less important in absolute terms with turnover approaching 8% of GDP and added value accounting for 2% of national wealth. Over the last ten years, however, the industrial processing stage has shown the most dynamism, with turnover and added value increasing by 45% and 15%, respectively, in the face of a reduction in domestic agricultural turnover at current market prices (-4%) . This phenomenon has been assisted by population growth which, accompanied by a significant growth in income, has stimulated the increase in internal demand in terms of quantity, but also and above all in terms of processed and high quality goods.

Another feature of the Turkish economy is the approach to foreign markets. The geographical position of the country offers good opportunities to access large markets such as Europe, the Middle East and North Africa. Amongst these the European Union is a privileged partner, not only because of Turkey's prospective membership of the Union, but also in consideration of the high levels of trade in general and agri-food products in particular. Indeed analysis of Turkey's international trade figures reveals that half of all trade is with the European Union. Turkey, as well as being a net importer of goods from the EU, is also the sixth most important outlet for European goods. When trade in agri-food products alone is considered, then the roles are reversed. In this context it is Turkey that has an advantageous position over the EU with a very positive trade balance. Confirmation of Turkey's agricultural strength and the level of bilateral trade with the EU is provided by the fact that the flow of agricultural and processed goods between the two economic areas accounts for more than 40% of Turkey's total agri-food trade.

The purpose of this study, therefore, is to analyse trade relations in agri-food products which have provided a strong link between Turkey and the EU for some time. This analysis provides an outline of how these relations might be developed in the near future as a result of the

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[2] To reduce the effects of cyclical factors, the data processed refers to a mean for the periods 1990-1991 and 2000-2001. Statistical sources courtesy of Turkey State Planning Organization (SPO) and OECD.

new impulse given to the recent agreements and Euro-Mediterranean partnership, as well as Turkey's prospective membership of the EU.

After an examination of Turkey's main economic policies which represent the directives for economic growth in the country and relations with partners, the dynamics and the composition of the flow of agri-food products in Turkey was examined in detail using the main structural components of Turkish trade, but also in terms of future growth. As well as analysis of Turkish agri-food imports and exports on the world market, specific attention is given to trade with the EU. Thus it has been possible to draw a map showing the trade flow with each member country.

Analytical indices have been used to assess the competitiveness of Turkey's international trade in terms of the structure of supply (sector specialisation and product differentiation) and in terms of the external macroeconomic environment (price competitiveness).

2. Agricultural policy and trade relations with the EU

The economic and structural situation in the 1980s saw Turkey attempt to achieve specific priority objectives by relying, in the main, on the application of agricultural policy tools. The main tools were as follows:

- An increase in the levels of yield and production. In terms of overall production, during the 1960s Turkey implemented a series of policies designed to promote cultivation of the land and to expand the total area of cultivated land. The objective was then concentrated on land productivity using inputs such as selected seeds, fertilisers and pesticides. The main tools used included financial assistance for the purchase of these inputs and favourable interest rates. These factors were accompanied by a high level of public investment in the irrigation system to increase yield and production.
- An increase in agricultural income and stabilisation of income. The set of aforementioned tools was expanded to include a policy of price support for agricultural products and measures to prevent a reduction in agricultural income and to bring per capita agricultural income into line with income in the rest of the economy.
- Attainment of self-sufficiency in food production and an increase in the level of agri-food exports.

One of the most important and widely used tools in Turkish agricultural policy is price support for agricultural products. Up to 1993 this tool was applied to almost all products, in particular cereals, tobacco, sugar cane and cotton. The mechanism involved the purchase of products at set prices by state-owned companies and the Agriculture Sales Cooperatives Union (ASCU). Total expenditure accounted for approximately 8-10% of gross domestic agricultural income. The only exception was the fresh fruit and vegetable sector where prices were subject to the forces of the free market. Subsidies given for using agricultural inputs such as seeds, plant protection products, animal feed and fertilisers were also an important factor.

During the mid-1990s the role of the state in the Turkish agricultural sector was reduced in accordance with the implementation of a structural reform process based on:

- Elimination of existing support policy and implementation of a system of direct income support, above all for the poorest farmers.
- Guarantee of full autonomy for the ASCU.
- Elimination of subsidies for the purchase of inputs.
- Privatisation of some state-owned companies in the agricultural sector.

In 1994 a new system was introduced for the products managed by the ASCU. Objective prices were set instead of minimum prices. Lower prices were also set to reflect the true level of world prices. Producers sell their products to the ASCU and receive a deficiency payment on the basis of the difference between the objective price and the price received.

In 1980, price support purchase applied to 24 commodities. By 1990 this had been reduced to 10. The years 1991, 1992 and 1993 saw some revival of the practice, but since 1994 the list has been effectively confined to cereals (wheat, barley, rye, oats, maize, rice), tobacco, sugar beet, tea and cotton. Thus all price support is now conducted by State Economic Enterprises (SEEs). The Agricultural Sales Cooperative Union is no longer involved. Furthermore, quantities purchased using the price support system have, on the whole, declined. The Turkish Sugar Factories (SEKER) used to buy all of the sugar beet crop. This has now been reduced to approximately 85% of the crop. Similarly tea was under state control for many years, but the Turkish Tea Industry Corporation (CAYKUR) now has some private sector competition. In the case of grains, Turkish Grains Board (TMO) purchases totalled 4.2 million tonnes in 1993, 0.2 million tonnes in 1995, and 1.3 million tonnes in 1996.

In other ways, the administration of price supports has been rationalised. More variation in the level of price supports has been introduced on the basis of quality (cereals, sugar, tobacco) to reduce the extent to which these price supports give more incentive to low quality production rather than high quality production.

The price support mechanism for zootechnical products concentrates on a high level of domestic protection based on import measures. However, on the whole, food prices remain relatively high because of existing protectionism in the agricultural sector, and despite the liberalisation process and the structural adjustement programme which has mainly involved other sectors.

Amongst the measures adopted towards the end of the 1990s the crop substitution programme should be mentioned. This encourages farmers to produce alternative products to hazel-nuts, tea, sugar and tobacco which have

a production surplus. Farmers taking part in the programme receive compensation due to the reduction in income resulting from the switch to products providing less income.

As far as market organisation is concerned, the Turkish government has continued the liberalisation process. In 2000 all preferences were eliminated and government representation in the activity of the ASCU was ended. A project was also set up to complete the conversion process to private cooperatives.

Confirmation of Turkish policy to reduce, if only modestly, the level of economic support for agriculture is given by the Producer Subsidy Equivalent (PSE), an important indicator used to evaluate support policy, which decreased from approximately 30% in 1993-95 to approximately 20% in 2000-2001.

Turkish policy is significantly protectionist in terms of trade relations. High price subsidises mean an increase in import tariffs, mainly for tobacco, cereals and sugar. Livestock import tariffs are also high, not only for hygiene and health reasons but also to give incentives to domestic production. Export subsidies are applied to a number of products, including fresh and processed fruit and vegetables and derived food products, such as olive oil, poultry meat and eggs.

Turkey's trade relations with the EU were quite dynamic from the outset. Indeed an agreement of association was signed in 1965 by Turkey and the EU. This agreement stipulated that Turkey would attempt to harmonise economic, trade and social policy in return for certain concessions from the EU. Specifically, Turkey would attempt to remove the trade barriers constituting one of the cornerstones of Turkish trade policy and at the same time implement a process to harmonise agricultural policy in accordance with the EU Common Agricultural Policy (CAP). This agreement, despite being beset by a continuously slow approach to negotiations, has been only partially implemented due to the frequent crises affecting the Turkish economy over the years and domestic policy choices. Therefore the results achieved by this agreement have not had that much effect given the continuation of a protectionist trade policy by Turkey and the failure of the EU to open its markets to many agricultural products.

In 1995[3], somewhat late in relation to the terms specified in the 1965 agreement of association, a final stage was implemented to create a Customs Union between Turkey and the EU. For the moment this union only applies to industrial products and processed agri-food products. Furthermore, it has done little to promote common agricultural policies and to some extent harmonisation of quality standards. It is, for example forbidden to import live cattle from the EU, and there are further restrictions relating to beef imports which are incompatible with the concessions specified in the current agreements.

Therefore the trade relations between Turkey and the EU are based on a system of preferential access[4] in which quantities, calendars and tariff reductions for the various products are defined. About 70% of Turkey's agricultural exports to the EU occur under preferential conditions. Of course such a figure does not reveal the potential increase in the level of exports that might have occurred in the absence of tariffs, some of which may effectively prohibit trade. Tariff rate quotas apply to apricot pulp and hazelnuts, and voluntary export restraint agreements apply to tomato paste and peeled tomatoes. The main other remaining restrictions facing Turkey, are:

- Minimum import (entry) prices for 11 fruits, 4 vegetables, grape juice and grape must.
- Seasonal restrictions for preferential tariffs for 4 fruits and 7 vegetables. For example tomato paste has a quota set at 30,000 tonnes, water melons 14,000 tonnes and onions 2,000 tonnes.
- High specific duties for almost all 'core' CAP products (cereals, sugar, dairy, meat, olive oil, etc.).
- Specific duties for a lot of preparations of cereals, fruits, and vegetables.

As far as import quotas applied by Turkey to agri-food products exported by the EU are concerned, a reduced tariff as part of fixed quotas is applied to the following products: live cattle, sugar, tomato paste and animal feed.

3. Development and structure of Turkish trade

3.1. Agrifood international trade

Over the last ten years the level of integration of the Turkish economy with international markets has increased considerably. This is mainly due to the mean annual growth in exports of 12% and an annual growth of 10% in the level of imports. This positive trend is further highlighted by the overall foreign trade figures (imports + exports) for 2000. These show that international trade now accounts for 55% of Turkish gross domestic product. However, despite the significant increases in foreign sales, the level of exports has been lower than the level of imports for years. This has resulted in a balance of trade deficit which can even be defined as structural (7% of GDP).

Agri-food is one of the sectors contributing most to the reduction in the trade deficit thanks to a very positive balance in 2000 which almost reached 2,200 million. The flow of agri-food products accounts for 13% of total exports and 6% of total imports.

In order to quantify the approach to international markets adopted by the agri-food sector in Turkey, specific structural indicators can be used to analyse the foreign trade results also in relation to domestic supply and demand trends. A first glance at Table 1 shows an increase

[3] Decision 1/95 of the EU-Turkey Association Council
[4] Regulation (CE) 1506/98 of the Council

in the value of each of the four indices calculated on the basis of mean data collected in the periods 1990-1991 and 1999-2000. This confirms the growing interrelationship between the production and consumption systems of Turkey and those of its international partners.

In detail the most significant increase (+5.3% during the reference period) was that seen for the trade openness index which shows the incidence of import-export flows in relation to domestic supply. Despite this dynamism the absolute figure for Turkey appears rather modest (20%) especially if compared to that for other Mediterranean countries. For example the incidence of trade volume on domestic production in Morocco, Tunisia and Algeria is between 35% and 40%[5].

In continuing the analysis it is important to be able to distinguish between the contribution given to the growth in international trade by import flows and that given by export flows. To achieve this the indices identifying the propensity to import and export can be compared[6]. In the case of the former, the index identifies the level of domestic demand satisfied by imported goods. The figure for Turkey is modest (7.3%) and less than that seen for all the other countries in the Mediterranean (mean of 30-35%). On the other hand the next index in the table (propensity to export) identifies the level of domestic production sold to export markets. The figure highlights a marked and growing trend to export Turkish agri-food products. Not only is this figure high (13.6%, greater than the majority of partner countries bounding the southern shore of the Mediterranean), the propensity to export has increased (+3.6 percentage points) over the last ten years.

Tab. 1 *Structural indices of agrifood Turkish trade*

	Average 1990-91	Average 1999-2000
Trade openness *(trade volume / domestic production)*	*15,1%*	*20,4%*
Propension to import *(import / internal availibility)*	*5,3%*	*7,3%*
Propension to export *(export / domestic production)*	*10,0%*	*13,6%*
Export to import ratio *(export / import)*	*198,2%*	*202,0%*

Source: Turkey State Planning Organization, Eurostat

The final index refers to trade coverage and provides an indication of the competitiveness of Turkish agri-food production on the world market. Assessment of the performance of Turkey's trade in agri-food products, given the increasingly high values, is undoubtedly positive and can even be compared with the performance seen in some important EU exporter countries such as Spain and France.

The growth and structure of Turkey's international trade in agri-food products can now be analysed in greater detail by examining the make-up of the main sectors[7] and the variations that occurred in the reference period, as shown in Table 2.

The first consideration emerging from an analysis of the available data concerns the overall volume of foreign trade which shows a significant increase (+45%) during the decade in question. This trend appears to be affected by the flow of both imported and exported agri-food products.

As far as the make-up of exports is concerned, a factor of note is the marked polarisation between a few sectors with by far the most important being fruit and vegetables (almost € 2,000 million) and beverages and tobacco (€ 570 million). Comparisons between the periods show positive variations for almost all the categories considered (mean of +46% for the decade) excluding live animals and meat (-96% and -6%, respectively). The largest amount of growth was recorded for sugar products (+521%)

Tab. 2 *Trend and composition of agrifood Turkish trade to the world and UE-15 (.000 €)*

	EXPORT 1990-91		EXPORT 1999-2000		IMPORT 1990-91		IMPORT 1999-2000	
	World	UE share	World	UE share	World	UE share	World	UE share
Live animals	162.219	*0,7%*	6.685	*8,2%*	86.273	*27,7%*	29.385	*13,8%*
Meat and edible meat	16.252	*5,5%*	15.225	*40,2%*	20.371	*18,2%*	1.443	*19,8%*
Dairy products	8.333	*18,6%*	27.383	*27,8%*	15.915	*14,6%*	38.729	*40,7%*
Fish	51.643	*50,4%*	94.126	*93,6%*	7.952	*7,1%*	34.255	*31,0%*
Cereals	216.871	*7,9%*	397.464	*17,4%*	261.896	*17,4%*	417.002	*14,3%*
Fruit and vegetables	1.385.303	*43,0%*	1.983.694	*51,0%*	39.301	*12,0%*	179.015	*7,9%*
Sugar	37.203	*25,3%*	231.111	*14,2%*	121.640	*6,4%*	16.415	*3,0%*
Coffee, tea, spices	51.511	*7,9%*	136.733	*12,1%*	32.625	*44,9%*	124.792	*62,6%*
Animal feed	5.174	*32,4%*	8.767	*25,4%*	51.417	*52,3%*	194.402	*60,8%*
Miscellaneous edible preparations	70.143	*85,7%*	161.122	*45,6%*	11.536	*13,7%*	96.056	*39,8%*
Beverages and tobacco	417.444	*1,1%*	569.088	*34,6%*	289.246	*20,5%*	342.138	*64,4%*
Animal, vegetable fats and oils	133.913	*15,5%*	174.188	*6,6%*	275.265	*81,8%*	407.641	*66,2%*
All agri-food sectors	2.959.489	*33,8%*	4.333.213	*43,3%*	1.493.130	*23,3%*	2.144.894	*24,8%*

Source: Turkey State Planning Organization, Eurostat

[5] The opening balance index is much higher in EU countries (Greece: 55%; Spain: 65%; Italy: 70%; Portugal: 80%; France: 90%).
[6] The indicators were constructed using the sum of agricultural production and added value of the processing industry as a proxy for the entire agri-food sector.

and dairy products (+229%).

A more uniform composition can be seen on the import side characterised by various significant sectors including cereals, fats and oils (€ 417 million and € 407 million, respectively), followed by beverages and tobacco (€ 342 million), animal feed, fruit and vegetables and coffee, tea and spices (between € 195 and € 125 million). Between 1990 and 2000 the level of imports increased by 44%. Imports in the fruit and vegetables and fish sectors increased by more than 300% during the same period.

As far as Turkey's trade relations on international markets in the agri-food sectors are concerned, the European Union is a partner of primary importance, as shown by the data describing the incidence of Turkish trade with the EU compared to that with the rest of the world (Table 2).

The increasing level of Turkish exports of agri-food products to the European market should be underlined (from 34% in 1990-1991 to more than 43% in 1999-2000). The largest contribution to this trend was made by fish, meat, beverages and tobacco products which are increasingly sold to European countries and have resulted in increases of over 30%. The European Union accounts for more than half of Turkey's fruit and vegetable and fish exports (51% and 93% of the total, respectively). The importance of exports in food processing preparations, sugar-based products, fats and oils and animal feed has decreased.

The flow of imports from the European Union is also significant (although not as important as exports) and accounts for approximately 25% of the total. This percentage has remained more or less stable during the periods in question (+1.5 %). The most significant imports from the EU are oils and fats, beverages and tobacco (more than 65% of the total value of imports for these sectors), coffee, tea and spices, animal feed (62% and 60%, respectively) and dairy products (41%).

This initial analysis of the structure and dynamism of Turkey's agri-food trade enables certain conclusions to be drawn concerning the role of individual sectors in the composition of international trade and in relation to domestic supply and demand. This analysis is extended below by examining data processed to assess the performance and therefore the competitiveness of Turkey's foreign agri-food trade. With regard to this study reference is mainly made to two aspects of competitiveness, that is to say the level of specialisation of Turkey's production sectors (comparative advantage and intra-industry trade) and the macroeconomic context (price competitiveness). Before analysing the data it should be stated that the level of aggregation of the data significantly conditions the results obtained. Therefore the analysis is done on two levels. The first examines the overall flow of Turkey's agri-food trade and the second examines trade relations with the EU using the import-export data supplied by Eurostat according to the combined classification.

[7] Aggregate data in accordance with SITC classification version 3.0.

The foundation of the traditional theory of international trade developed by Ricardo is represented by the concept of comparative advantage which ascribes the reasons for trade to the differences existing between countries. Specifically the term "comparative" has two meanings. The first refers to the competitiveness of two different countries and is therefore a measure of the level of relative efficiency of two corresponding production systems. The second, in consideration of the opportunity cost in the allocation of resources to alternative uses, is also a measure of the relative efficiency of the various sectors in a single production system.

In this analysis context, the first indicator often used to assess sector trade performance is the normalised balance, defined as the relationship between the trade balance and the overall volume of trade of a sector:

$$(1) \qquad SN_i = \frac{(X_i - M_i)}{(X_i + M_i)} * 100$$

where:

X_i = i^{th} sector exports

M_i = i^{th} sector imports

This relationship has a value between –100% (in the event of a country that only imports) and +100% (in the event of a country that only exports). Therefore positive and increasing values for the index mean proportional specialisation and comparative advantage for the product in question.

The graph below shows the growth of the normalised balance for the main agri-food sectors in Turkey during the periods 1990-1991 and 1999-2000. As can be seen the agri-food sector as a whole has a very positive stable value (+34% at the end of the period in question) as do the traditional fruit and vegetable and fish sectors. However the normalised balance of these two specialist sectors decreased (11% and 27%, respectively) due in both cases to a massive increase in imports (more than 300%) and a relatively small increase in exports.

Perhaps the most striking performance was that of sugar with a very negative normalised balance transformed into a value close to +90%. Good performance was also seen in the cereal and zootechnical sectors (live animals, meat and dairy products). This trend is undoubtedly the result of increased productivity due to the introduction of more advanced agricultural techniques and more efficient technical means (particularly fertilisers). However the results of the protectionist economic policy pursued by Turkey to support those sectors which traditionally have a trade deficit should not be overlooked.

A second useful tool in the analysis of competitiveness and comparative advantage of trade flows is Lafay's index. This enables the results from analysis of the normalised balance of individual sectors to be integrated because, contrary to the indices described above, it takes into consideration a "dimensional effect" which accounts for the weight of the sector in question on the overall volume of agri-food trade

in the country. In the equation that follows this effect is incorporated in the term outside the brackets, whereas the one inside the brackets represents a "performance effect" (expressed as a deviation relative to overall performance) of the import and export flows of the i^{th} sector[8]:

$$(2) \qquad L_i = \frac{(X_i + M_i)}{\sum_i (X_i + M_i)} * \left[\frac{(X_i - M_i)}{(X_i + M_i)} - \frac{\sum_i (X_i - M_i)}{\sum_i (X_i + M_i)} \right]$$

where:
X_i = i^{th} sector exports
M_i = i^{th} sector imports

The Lafay index can also have either positive or negative values. Positive values are a comparative advantage, in proportion with their size, whereas negative values show those with a comparative disadvantage in Turkey's agri-food trade balance.

Table 3 shows the results obtained for Turkey using this index. Contrary to the graph shown earlier, this table shows the absolute excellence achieved by the fruit and vegetable sector which has by far the highest index of competitiveness value. Other sectors which showed equally good performance in the normalised balance analysis, such as sugar, meat and fish, have far lower Lafay index values mainly due to their low incidence on the overall volume of Turkey's agri-food trade. The comparison between the variations in the values for the two periods in question shows the very low level of dynamism in many sectors and in particular highlights those sectors with a trade performance that is not at all commensurate with their weight in the overall volume of trade. Indeed for sectors of primary importance[9] such as cereals, beverages and tobacco the index has a negative value thus highlighting de-specialisation and the comparative disadvantage of Turkey in international markets.

3.2. Trade flows with the European Union

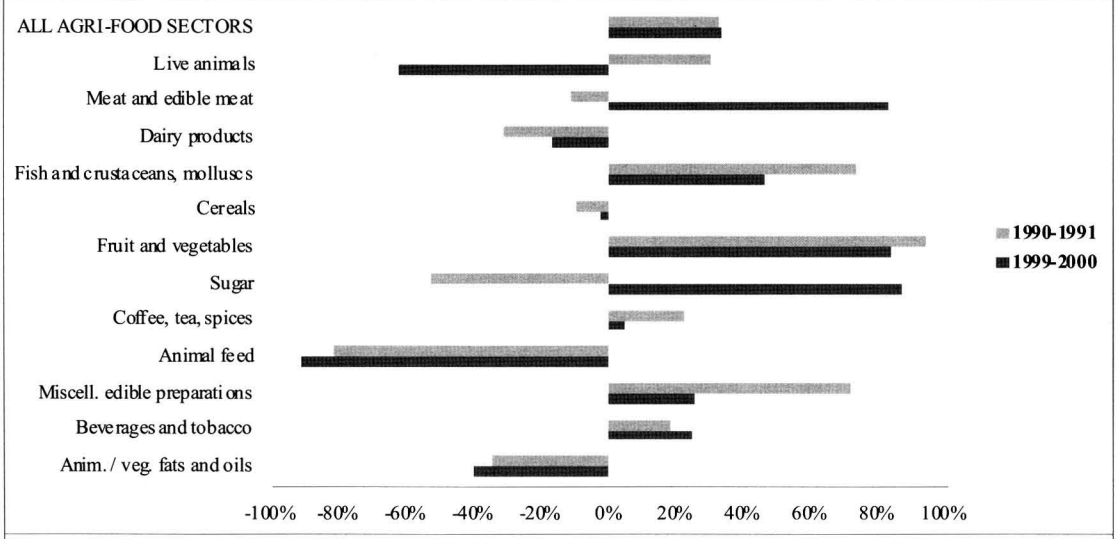
As mentioned earlier, after having examined Turkey's agri-food trade with the whole world, it is now useful to analyse trade relations with the EU. The relative volume of this trade has already been described in section 3.1, however a more detailed classification of the data is given below[10] to assess the absolute volume in conjunction with the variations over the last ten years and to draw an import - export route map for each individual member country.

The first consideration emerging from an examination of the available data (Table 4) concerns the level of trade between Turkey and the EU. The figures for trade with the EU have grown far more than the mean figures for Turkey's agri-food trade with the world as a whole.

Specifically exports increased (+87%) led by the fruit, vegetable and fruit preparations and tobacco sectors which are the main export components (75% of the total) and which increased by more than 90%. The good performance in terms of exports to the EU of other sectors should also be underlined. Some of these sectors have now become important in their own right and include olive oil (currently the sixth item in the exports league table) and processed meat and fish products. Fish and vegetable exports decreased (both –3%).

As far as imports are concerned, whereas in 1990 cereals accounted for the largest level of expenditure, this item is now only the sixth largest in the overall league table of agri-food imports. This is mainly due to the growth in domestic production and to a lesser extent as a result of Turkey's decision to purchase this type of product from other markets. Currently the oils and fats sector (unlike olive oil) is the largest single item in Turkey's list of purchases from the EU. It is important to note that, contrary to what was seen with export flows, imports are less concentrated in specific sectors to the extent that the first four items account for 53% of the total. Imports from the EU are increasing in the food process-

Graph. 1 *Normalised trade balance for Turkey's agri-food sector*



Source: Eurostat

[8] The first factor is given by the ratio between the volume of sector trade and the total volume of agri-food trade, whereas the second factor is the difference between the normalised balance for the sector and the normalised balance for all agri-food trade.
[9] See Table 2.
[10] Combined Eurostat classification

Tab. 3 *Comparative advantage index of Turkey's agri-food trade*

	L_i (1990-1991)	L_i (1999-2000)
Live animals	-0,1%	-0,5%
Meat and edible meat	-0,4%	0,1%
Dairy products	-0,3%	-0,5%
Fish and crustaceans, molluscs	0,5%	0,3%
Cereals	-4,6%	-4,5%
Fruit and vegetables	19,7%	16,6%
Sugar	-3,1%	2,0%
Coffee, tea, spices	-0,2%	-1,2%
Animal feed	-1,5%	-3,9%
Miscellaneous edible preparations	0,7%	-0,3%
Beverages and tobacco	-2,3%	-1,2%
Animal or vegetable fats and oils	-6,2%	-6,6%

Source: Eurostat

ing, tobacco processing, beverages, spirits and vinegar, cereal-based preparations and miscellaneous edible preparations sectors. The significant, although not so important in relative terms, growth in the level of fruit and fish imports, sectors in which Turkey is traditionally strong, should be noted.

Other interesting factors emerge from the breakdown of import - export flows between Turkey and the EU in terms of country of destination or origin (Table 5 and Table 6). In the first instance distribution between the member countries is quite uniform. By calculating the level of trade with Turkey's four most important EU partner countries, a geographical concentration index can be identified which is equal to 70% of Turkey's exports and 66% of imports. The countries having the highest level of trade are as follows[11]: Germany, United Kingdom, Italy, Holland, France and Spain. However the importance of these countries varies according to the type of flow under consideration.

As far as Turkish exports are concerned, more than one third of those destined for the EU are absorbed by Germany, with Italy, United Kingdom, Holland and France accounting for between only 9% and 13% of the total.

An examination of the product-country figures shows that

Tab. 4 *Turkey's agri-food trade with the EU (€ 000)*

	Export			Import		
	1990-1991	1999-2000	var %	1990-1991	1999-2000	var %
Live animals	1.839	2.312	+26%	17.664	18.911	+7%
Meat and edible meat	1.452	780	-46%	15.226	933	-94%
Fish and crustaceans, molluscs	44.246	42.941	-3%	1.086	13.619	+1155%
Dairy products	2.698	6.967	+158%	8.325	23.535	+183%
Edible vegetables, roots and tubers	127.837	124.202	-3%	3.250	7.774	+139%
Edible fruit and nuts	467.274	887.888	+90%	1.475	6.305	+328%
Coffee, tea, mate and spices	13.010	19.411	+49%	2.083	3.757	+80%
Cereals	1.569	32.679	+1983%	72.434	57.397	-21%
wheat	30	27.251	+92276%	53.865	27.660	-49%
Products of the milling industry	13.342	12.499	-6%	982	3.624	+269%
Oil seeds and oleaginous fruits	27.429	36.494	+33%	8.728	37.314	+328%
Animal or vegetable fats and oils	7.351	70.078	+853%	50.033	80.545	+61%
olive oil and its fractions	1.208	59.702	+4844%	25	118	+382%
Preparations of meat or fish	10.455	37.847	+262%	1.584	1.167	-26%
Sugars and sugar confectionery	5.763	15.327	+166%	99.531	10.873	-89%
Preparations of cereals	4.039	12.580	+211%	7.498	32.506	+334%
Preparations of vegetables, fruit and nuts	188.543	394.309	+109%	1.172	7.188	+514%
Miscellaneous edible preparations	5.558	19.455	+250%	5.180	60.102	+1060%
Beverages, spirits and vinegar	6.402	22.125	+246%	29.930	61.656	+106%
Animal feed	409	1.522	+273%	8.927	27.809	+212%
Tobacco and manuf. substitutes	71.200	135.922	+91%	12.253	77.581	+533%
Total agro-food trade with the EU-15	**1.000.412**	**1.875.332**	**+87%**	**347.356**	**532.592**	**+53%**
Total world agro-food trade	**2.959.489**	**4.333.213**	**+46%**	**1.493.130**	**2.144.894**	**+44%**

Source: Eurostat

the German market is the most important outlet for many Turkish products such as those from the milling industry (84% of total exported to the EU), dairy products (77%), meat and fish preparations and cereal preparations (62% and 61%), beverages, spirits and vinegar (54%). Export products finding a large outlet in Italy include cereals (particularly grain, 77%), fats and oils - with olive oil playing a major role (67%) - and meat (49%). As far as the last two categories are concerned it should be noted that apart from Italy, the only other EU country importing meat is France and the only one importing olive oil is Spain. None of the other production sectors appear to have such a polarised distribution outline and none of the other countries analysed appear to give precedence to certain Turkish products over others. The only exception is animal feed, with Holland accounting for 45% of exports to the EU.

In terms of the geographical outline of Turkey's agri-food imports from the EU are concerned, the first factor of note compared to exports is the make-up of the main trading partners. Specifically, Germany is still the leading trading partner whilst Italy is in sixth position behind the United Kingdom, France, Holland and Spain.

The comparison with export flows shows that the geographical distribution of imports is much less varied. The four most important countries supply between 12% and 23% of total imports. This demonstrates Turkey's high level of integration with the majority of EU countries in terms of the markets in which imports are purchased. Sectors in which individual countries account for the majority of a specific import are fish (81% of the total from Spain), wheat and milling industry products (more than 75% from Germany), beverages and live animals (60% and 53%, respectively from the United Kingdom) and olive oil (mainly purchased in Italy).

Tab. 5 *Destination of Turkey's agri-food exports to the EU (€ 000, 1999-2000)*

	EU-15	D	I	UK	NL	F	A	E
Live animals	2.312	2%	28%	12%	1%	57%	1%	0%
Meat and edible meat	780	1%	49%	0%	0%	48%	0%	0%
Fish and crustaceans, molluscs	42.941	2%	39%	1%	15%	14%	2%	7%
Dairy products	6.967	77%	0%	6%	7%	3%	3%	0%
Edible vegetables, roots and tubers	124.202	32%	8%	12%	6%	9%	18%	3%
Edible fruit and nuts	887.888	36%	13%	14%	7%	9%	9%	2%
Coffee, tea, mate and spices	411	42%	3%	13%	17%	7%	4%	4%
Cereals	32.679	3%	72%	0%	1%	3%	0%	11%
wheat	27.251	0%	77%	0%	1%	0%	0%	10%
Products of the milling industry	12.499	84%	0%	0%	1%	3%	7%	0%
Oil seeds and oleaginous fruits	36.494	31%	15%	4%	14%	8%	1%	15%
Animal or vegetable fats and oils	70.078	1%	63%	2%	1%	1%	0%	23%
olive oil and its fractions	59.702	0%	67%	0%	0%	0%	0%	26%
Preparations of meat or fish	37.847	62%	13%	0%	1%	17%	0%	0%
Sugars and sugar confectionery	15.327	24%	7%	12%	5%	6%	17%	10%
Preparations of cereals	12.580	61%	1%	13%	9%	1%	1%	0%
Preparations of vegetables, fruit and nuts	394.309	40%	4%	12%	17%	11%	4%	2%
Miscellaneous edible preparations	19.455	43%	3%	5%	3%	11%	1%	22%
Beverages, spirits and vinegar	22.125	54%	0%	10%	7%	15%	2%	2%
Animal feed	1.522	8%	2%	5%	45%	26%	0%	1%
Tobacco and manuf. substitutes	135.922	38%	7%	1%	25%	7%	4%	7%
All agri-food sectors	**1.875.332**	**35%**	**13%**	**11%**	**10%**	**9%**	**7%**	**4%**

D: Germany, I: Italy, UK: United Kingdom, NL: Netherlands, F: France, A: Austria, E: Spain.

Source: Eurostat

Tab 6 *Origin of Turkey's agri-food imports from the EU (€ 000, 1999-2000)*

	EU-15	D	UK	F	NL	E	I	GR
Live animals	18.911	18%	53%	12%	5%	0%	1%	0%
Meat and edible meat	933	13%	2%	11%	2%	0%	15%	11%
Fish and crustaceans, molluscs	13.619	1%	2%	5%	1%	81%	0%	8%
Dairy products	23.535	14%	2%	32%	16%	1%	2%	0%
Edible vegetables, roots and tubers	7.774	23%	6%	4%	59%	2%	2%	1%
Edible fruit and nuts	6.305	13%	12%	8%	14%	5%	12%	20%
Coffee, tea, mate and spices	3.757	38%	16%	2%	9%	1%	24%	0%
Cereals	57.397	47%	0%	21%	1%	1%	29%	1%
wheat	27.660	79%	0%	17%	0%	1%	1%	1%
Products of the milling industry	3.624	76%	2%	5%	5%	1%	2%	0%
Oil seeds and oleaginous fruits	37.314	16%	0%	9%	40%	1%	3%	24%
Animal or vegetable fats and oils	80.545	13%	2%	22%	13%	38%	7%	2%
olive oil and its fractions	118	0%	0%	0%	0%	19%	54%	28%
Preparations of meat or fish	1.167	14%	7%	13%	20%	5%	8%	4%
Sugars and sugar confectionery	10.873	30%	10%	12%	3%	17%	11%	1%
Preparations of cereals	32.506	15%	13%	21%	10%	8%	6%	0%
Preparations of vegetables, fruit and nuts	7.188	21%	4%	17%	16%	12%	7%	4%
Miscellaneous edible preparations	60.102	32%	11%	12%	16%	15%	4%	0%
Beverages, spirits and vinegar	61.656	8%	60%	8%	14%	1%	2%	0%
Animal feed	27.809	16%	15%	9%	11%	3%	5%	6%
Tobacco and manuf. substitutes	77.581	32%	33%	5%	1%	2%	3%	22%
All agri-food sectors	**532.592**	**23%**	**18%**	**14%**	**12%**	**11%**	**7%**	**6%**

D: Germany, UK: United Kingdom, F: France, NL: Netherlands, E: Spain, I: Italy, GR: Greece.

Source: Eurostat

[11] Measured as volume of trade = (import + export)

4. Competitiveness and partnerships in trade between Turkey and the EU

One of the purposes of this study is to assess the level of competitiveness and the level of integration of trade between Turkey and the European Union. Comparative advantage data, calculated using Lafay's index and already used to analyse the overall level of Turkey's trade flows, is now used to assess these two factors.

Furthermore, another phenomenon is taken into consideration in the analysis of imports and exports with the EU. This is known as intra-industry trade, something which is highly developed between advanced economies and which provides information concerning the complementarity of the trade flows in question.

Finally the terms of trade and dependency index of imports from the EU on exports from Turkey were calculated. These two elements are also used to assess the competitiveness of a country in international trade.

4.1. Inter-sector specialisation and intra-industry trade

The classical approach to international trade theory states that trade takes place according to the level of specialisation of each country in the production of the various categories of goods. Thus it is important to identify localised sectors and the level of competitive advantage of each country under consideration.

To achieve this Lafay's index (Li) was calculated again on the basis of Turkey-EU trade data and the values shown in Table 7 were obtained.

The first conclusion to be drawn from this table is that Turkey's comparative advantage for the majority of sectors is higher with the whole world than with the EU. Therefore for trade flows to and from the EU the level of specialisation is on average lower than that seen for all agri-food foreign trade.

Turkey only has a comparative advantage over the EU in five of the twenty sectors under consideration. The five sectors are fruit, preparations of vegetables and fruit, vegetables, olive oil and preparations of meat and fish. However the index is only significantly high for the first two of these sectors (15.9% and 6.8%), whereas for the last three the figure ranges from a maximum of 1.8% to a minimum of 0.6%.

In terms of improvement the figures for cereals (wheat in particular) and sugars and sugar confectionery are encouraging with Lafay's index showing a considerable increase (from –5.9% to –1.3% for wheat and from –10.7% to –0.4% for sugar).

The results obtained by applying classic comparative advantage analysis appear to be consistent and provide some important information concerning the level of sector specialisation in trade between Turkey and the EU. However the latest developments in international trade theory provide a further analytical contribution. This involves assessment of specific elements characterising modern production and consumption systems such as the influence of seasonal factors and geographical origin, growing product differentiation and product processing which increases added value, and the intensity and volume of trade between countries with similar assessment criteria values.

Therefore on the basis of the study begun by Balassa in 1966 it is recognised that the possibility for product differentiation combined with the advantages derived from better performance increase the level of trade in similar goods. What we are witnessing today is in fact intra-industry specialisation between countries as a result of which different types of the same good are traded. Product differentiation is horizontal in the case of a good with more than one variety and vertical when trade is made up of goods that have been subject to processing (semi-processed and finished goods).

Analysis of intra-industry specialisation of Turkey's agri-food trade is based on the index developed by Gruber and Lloyd which measures the level of product overlay between imports and exports. With reference to the i^{th} sector, the index is based on the difference between the overall volume of trade (Xi+Mi) and the absolute value of the trade balance |Xi-Mi|. In order to make comparisons between different sectors this difference is compared with the overall trade balance for the sector and leads to the following intra-industry trade index formula:

$$IIT_i = \left[\frac{(X_i + M_i) - |X_i - M_i|}{(X_i + M_i)}\right] * 100 = \left[1 - \frac{|X_i - M_i|}{(X_i + M_i)}\right] * 100 \quad (3)$$

where:
X_i = i^{th} sector exports
M_i = i^{th} sector imports

The index can vary between 0% and 100% with higher values indicating greater overlay of import and export flows for the sector in question thus highlighting increasing levels of intra-industry specialisation.

The data displayed in Table 7 shows that between 1990 and 2000 the values calculated for intra-industry trade increased in all sectors with a mean increase of almost 24%. The only exceptions are olive oil, preparations of meat and fish, preparations of cereals and miscellaneous edible preparations.

The most recent data highlight significant complementarity in the trade of various goods, and in particular wheat and oil seeds which both have a value approaching 100%. There is also a high level of complementarity for fats and oils, meat and sugars and sugar confectionery (between 83% and 93%). Other products with a high level of intra-industry specialisation with the EU are tobacco and manufactured substitutes, cereals, preparations of cereals and beverages, spirits and vinegar which all have an index value greater than 50%.

The results seem to show that agri-food trade flows be-

tween Turkey and the EU are characterised by a high and increasing level of product overlay, particularly for those categories of goods subject to processing before they reach the final customer. Therefore it is possible to conclude that the intra-industry specialisation identified is based mainly on the vertical differentiation of trade goods and therefore there is a significant level of complementarity between the two production systems.

4.2 Price competitiveness and dependency of EU imports on Turkish exports

The analysis conducted up to now concerning the competitiveness of Turkey's agri-food trade is designed to examine long-term dynamics and structural aspects such as the incidence of trade in relation to domestic supply and demand, as well as the level of inter-sector and intra-industry specialisation that we have just seen. If on the one hand these elements represent the basis used to assess the ability of a country to compete on international markets, on the other hand it is also important to consider the macroeconomic context and any conditioning resulting from variables which cannot always be controlled by individual countries. The most important of these parameters, indeed ones which play a vital role, are exchange rates and the prices of goods traded on a world level.

A frequently used indicator to assess the price competitiveness of a country's foreign trade is given by the relationship between export prices and import prices, expressed in the same currency, known as the exchanging price ratio. For the purposes of this study, the following formula has been adopted to express the price ratio between Turkey and the EU:

$$(4) \qquad ER_i^{TR\text{-}EU} = \frac{PX_i^{TR\text{-}EU}}{PM_i^{TR\text{-}EU}}$$

where:

$PX_i^{TR\text{-}EU}$ = price in euro of Turkey's i^{th} sector exports to the EU

$PM_i^{TR\text{-}EU}$ = price in euro of Turkey's i^{th} sector imports from the EU

Given this definition, values less than one for this ratio correspond to goods sold by Turkey on the world market at lower prices – and therefore more competitive – than those paid to import the same goods. On the other hand, values greater than one for this ratio correspond to goods which can only be sold abroad at a higher price than the world one.

By examining the results for Turkey's international agri-food trade between 1990 and 2000 (Table 8) a general improvement in the terms of trade is highlighted given the mean decrease of 36% (from 3.3 to 2.1). The largest percentage decreases were seen for cereals and wheat in particular, olive oil, beverages and products of the milling industry. On the other hand large price increases were seen for goods in the oil seed, sugars and sugar confectionery, fish, citrus fruit and meat sectors. Turkish goods which currently have a price advantage over EU goods are few and the same as those which were already competitive in 1990. Amongst those of note are goods in the beverages, spirits and vinegar sector and olive oil (ERi = 0.2), preparations of cereals, miscellaneous edible preparations, animal feed, coffee, tea, maté and spices and tobacco and manufactured substitutes.

The results obtained using a specially constructed indicator are given at the end of the analysis to provide further information concerning the importance of Turkey's agri-food trade with the EU and to assess European prospects. The formula shown below is used to identify the proportion of EU imports in the i^{th} sector originating in Turkey and can therefore be used as an index of de-

Tab. 7 *Comparative advantage and intra-industry trade between Turkey and EU*

	Comp. Advantage (L_i)		Intra-ind. Trade (IIT_i)	
	1990-1991	1999-2000	1990-1991	1999-2000
Live animals	-1,9%	-1,2%	18,9%	21,8%
Meat and edible meat	-1,6%	0,0%	17,4%	91,0%
Fish and crustaceans, molluscs	1,6%	-0,1%	4,8%	48,2%
Dairy products	-0,8%	-1,4%	49,0%	45,7%
Edible vegetables, roots and tubers	4,5%	1,8%	5,0%	11,8%
Edible fruit and nuts	17,7%	15,9%	0,6%	1,4%
Coffee, tea, mate and spices	0,3%	0,1%	27,6%	32,4%
Cereals	-7,9%	-3,1%	4,2%	72,6%
wheat	-5,9%	-1,3%	0,1%	99,3%
Products of the milling industry	0,4%	0,0%	13,7%	45,0%
Oil seeds and oleaginous fruits	0,1%	-1,7%	48,3%	98,9%
Animal or vegetable fats and oils	-5,2%	-3,9%	25,6%	93,1%
olive oil and its fractions	0,0%	1,1%	4,0%	0,4%
Preparations of meat or fish	0,2%	0,6%	26,3%	6,0%
Sugars and sugar confectionery	-10,7%	-0,4%	10,9%	83,0%
Preparations of cereals	-0,7%	-1,9%	70,0%	55,8%
Preparations of vegetables, fruit, nuts	7,1%	6,8%	1,2%	3,6%
Miscellaneous edible preparations	-0,4%	-3,5%	96,5%	48,9%
Beverages, spirits and vinegar	-3,1%	-3,6%	35,2%	52,8%
Animal feed	-1,0%	-1,8%	8,8%	10,4%
Tobacco and manuf. substitutes	1,4%	-2,5%	29,4%	72,7%

Source: Eurostat

pendency of EU imports on Turkish exports:

$$(5) \qquad ID_i^{EU\text{-}TR} = \frac{X_i^{TR\text{-}EU}}{M_i^{EU}} * 100$$

where:
$X_i^{TR\text{-}EU}$ = i^{th} sector exports from Turkey to the EU
M_i^{EU} = i^{th} sector imports to the EU from the world

Given that EU demand for foreign agri-food goods is very high (approximately twice the level of Turkish gross domestic agricultural product), it is fair to expect this index to have relatively low values. However, examination of the data displayed in Table 8 shows that not only has the overall index figure increased from 2.5% to 3.2%, but also that the contribution of Turkish imports is significant for various EU agri-food sectors. Specifically almost 20% of EU olive oil imports come from Turkey, and despite the reduction in the figures compared to 1990 almost 16% of EU imports in milling industry products are Turkish. Significant values were also seen for preparations of vegetables, fruit and nuts, fresh fruit and nuts (in particular citrus fruits), tobacco and wheat. Indeed the majority of remaining sectors witnessed an increase during the decade in question.

5. Conclusions

The purpose of this study was to analyse the main development trends and the most relevant structural aspects, as well as those relating to the competitiveness of Turkey's agri-food trade, as part of the increasing integration between production and consumption systems characterising modern economies.

Supported by economic policy choices, both on a domestic level and as part of regional agreements such as the Euro-Mediterranean partnership, the level of integration of the Turkish economy with international markets increased considerably during the decade in question. Despite the structural deficit in Turkey's international trade balance, the agri-food sector has for some time been one of the main positive items in Turkey's international trade figures. The use of certain structural indices has made it possible to specifically highlight a marked propensity to sell goods on international markets, even though exports continue to be concentrated in a few production sectors for which genuine sector specialisation can be identified (mainly fruit and vegetables, beverages and sugars and sugar confectionery).

Tab. 8 *Turkish exchanging price ratio and level of dependency of EU imports on Turkey*

	$ER^{TR\text{-}EU}$		$ID^{EU\text{-}TR}$	
	1990-1991	1999-2000	1990-1991	1999-2000
Live animals	2,5	1,9	*0,3%*	*0,3%*
Meat and edible meat	3,0	4,7	*0,1%*	*0,0%*
Fish and crustaceans, molluscs	2,8	5,1	*0,8%*	*0,5%*
Dairy products	1,7	1,2	*0,3%*	*0,6%*
Edible vegetables, roots and tubers	2,1	1,8	*4,8%*	*4,8%*
Edible fruit and nuts	1,1	1,4	*8,0%*	*11,1%*
citrus fruit	0,7	1,3	*4,2%*	*9,1%*
Coffee, tea, mate and spices	0,5	0,5	*0,4%*	*0,4%*
Cereals	10,0	1,1	*0,2%*	*2,1%*
wheat	4,5	1,1	*0,0%*	*4,7%*
Products of the milling industry	6,2	3,8	*20,0%*	*15,9%*
Oil seeds and oleaginous fruits	0,1	2,5	*0,7%*	*0,7%*
Animal or vegetable fats and oils	2,0	2,8	*0,4%*	*2,8%*
olive oil and its fractions	0,5	0,2	*0,7%*	*19,5%*
Preparations of meat or fish	1,0	0,9	*0,6%*	*1,4%*
Sugars and sugar confectionery	0,6	1,7	*0,5%*	*1,1%*
Preparations of cereals	0,3	0,3	*1,3%*	*2,4%*
Preparations of vegetables, fruit and nuts	1,1	1,3	*8,7%*	*12,3%*
Miscellaneous edible preparations	0,3	0,3	*1,3%*	*1,8%*
Beverages, spirits and vinegar	0,4	0,2	*0,8%*	*0,8%*
Animal feed	0,4	0,4	*0,0%*	*0,0%*
Tobacco and manuf. substitutes	0,5	0,7	*3,4%*	*5,5%*
All agri-food sectors	**3,3**	**2,1**	***2,5%***	***3,2%***

Source: Eurostat

In the context of Turkey's international agri-food trade, the European Union represents a primary partner in terms of the volume of trade and the prospects for increasing economic and political integration as a result of the Euro-Mediterranean agreements and Turkey's candidature for EU membership. Over the last ten years Turkish trade with the EU has increased far more than the mean figures for Turkey's international agri-food trade as a whole. These trade relations are particularly significant with a small number of EU partners, most importantly Germany. Overall, exports to the EU appear more polarised than imports giving rise to privileged

markets for some sectors (for example Germany for milling industry products and dairy products, Italy for wheat and olive oil and France together with Italy for meat).

Analysis of the competitiveness of agri-food trade flows, with particular reference to the EU, shows that Turkey has a low level of sector specialisation, and a comparative advantage in only five of the sectors under consideration (fruit, preparations of vegetables and fruit, vegetables, olive oil and preparations of meat and fish). Analysis of intra-industry specialisation for Turkey's agri-food trade shows significantly high values for various products and an increase in the indicators for nearly all the sectors in question. The results indicate that international agri-food trade between Turkey and the EU is characterised by a high and increasing level of product overlay, particularly for those categories of goods subject to processing before they reach the final customer. Therefore the intra-industry specialisation identified is mainly based on the vertical differentiation of the goods traded. It can be concluded that there is an appreciable level of complementarity between the two production systems.

So as not to overlook an important factor influencing the competitiveness of foreign agri-food trade, the analysis continued by examining Turkey's terms of trade with the EU. In light of the results obtained it can be concluded that Turkish goods do not enjoy price advantages over goods produced in the EU and traded on the international market. However a general improvement in the terms of trade can be seen during the decade in question. There are currently only a few Turkish goods which have a price advantage over their EU counterparts. The most important of these sectors are beverages, spirits and vinegar, olive oil and preparations of cereals.

The analysis was completed by assessing the importance of agri-food trade between Turkey and the EU from a European prospective. This assessment was done using an index identifying the dependency of EU imports on Turkish exports. The values highlighted, somewhat surprisingly, that Turkey is becoming a significant source of imports for the EU in various sectors with the most important ones being olive oil, the milling industry, fruit and vegetables and preparations of fruit and vegetables.

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