

## Dependence on agricultural trade in Turkey

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**Key words:** agriculture, trade dependence, import coverage of exports, organic agriculture, Turkey

### Abstract

*This study is an attempt to show the dependence on agricultural trade in Turkey focusing on the "import coverage of exports". Using this simple methodology, we aim at showing whether Turkey relies on exports or imports of food and live animals. The analysis indicates that Turkey has gradually become import dependent in some of agricultural products such as meat and meat preparations, live animals and feeding stuff for animals. Besides, exports of organic products have been on a declining trend since 2003.*

### Introduction

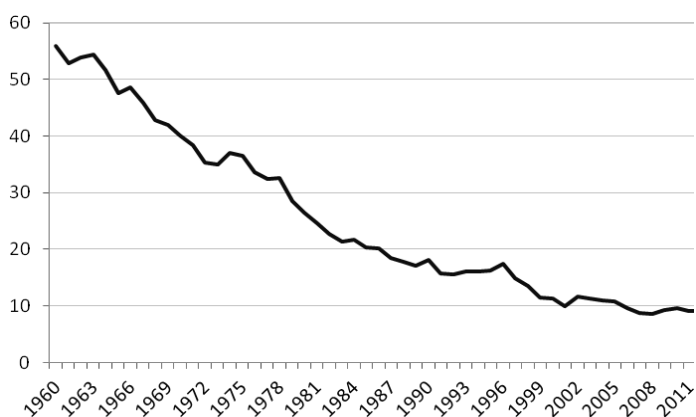
Although Turkey has been known to be self-sufficient in food production, the share of its agriculture sector in total gross domestic product (GDP) has been declining for several decades. As such, the country is becoming more and more dependent on agricultural products from abroad. This study undertakes an analysis of the dependence on agricultural trade focusing on the import coverage of exports calculated as "exports divided by imports" in percentages. This measure helps to see whether a country relies on exports or imports of a specific product or product group. Besides, export value of organic products is displayed in a separate graph. Since organic imports are very limited, import coverage of organic exports is not calculated.

### Material and methods

This study uses data for agricultural value-added, imports and exports of food and live animals, and its subcategories as well as exports of organic products from the data sources such as World Development Indicators (WDI), Turkish Statistical Institute (TUIK) and the Ministry of Food, Agriculture and Livestock. It carries out a descriptive analysis of these indicators graphing their trends in time. In addition, it utilizes a very simple indicator of agricultural trade dependence which is calculated as "exports divided by imports" in percentages.

### Results

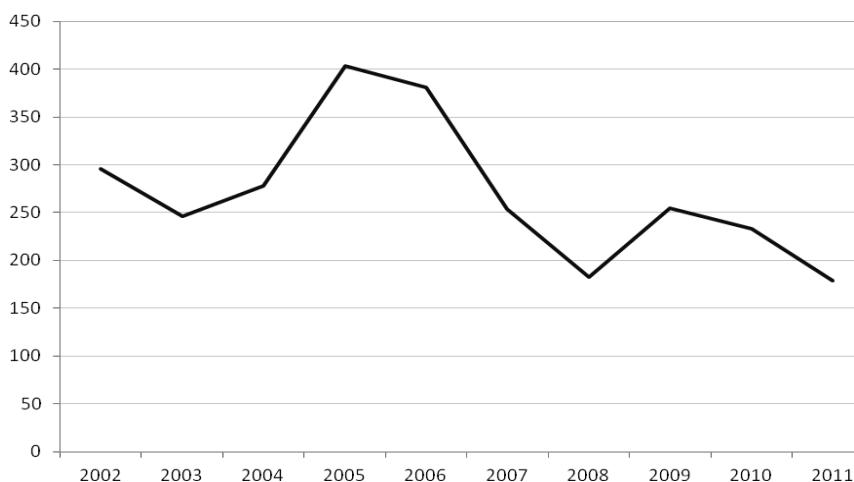
Although Turkey depicted a self-sufficient economy in terms of agriculture in the past, there has been a sharp decline in agricultural production as a share of GDP in recent years. Agriculture made up 56% of total value added in 1960. As of 2012, the share of agricultural value added in Turkish GDP fell down to 9%. Figure 1 illustrates this rapid decline in the last five decades. What is more, since mid-1980s, Turkey has been a net importer of agricultural raw materials owing to a declining share of agricultural exports as a share of merchandise exports and an increasing share of agricultural imports (WDI, 2013).



**Figure 1. Agriculture, value added (% of GDP)**

Source: WDI (2013). *Note: Agriculture corresponds to ISIC divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs (WDI, 2013).*

According to the Standard International Trade Classification, Rev.4 (SITC Rev.4), imports covered by exports (%) for “Food and live animals” displays a volatile figure in the last ten years. As of 2002, import coverage of exports (%) was around 295 meaning that the exports were almost three times the imports of food and live animals in Turkey. This ratio dropped down to 178 in 2011.



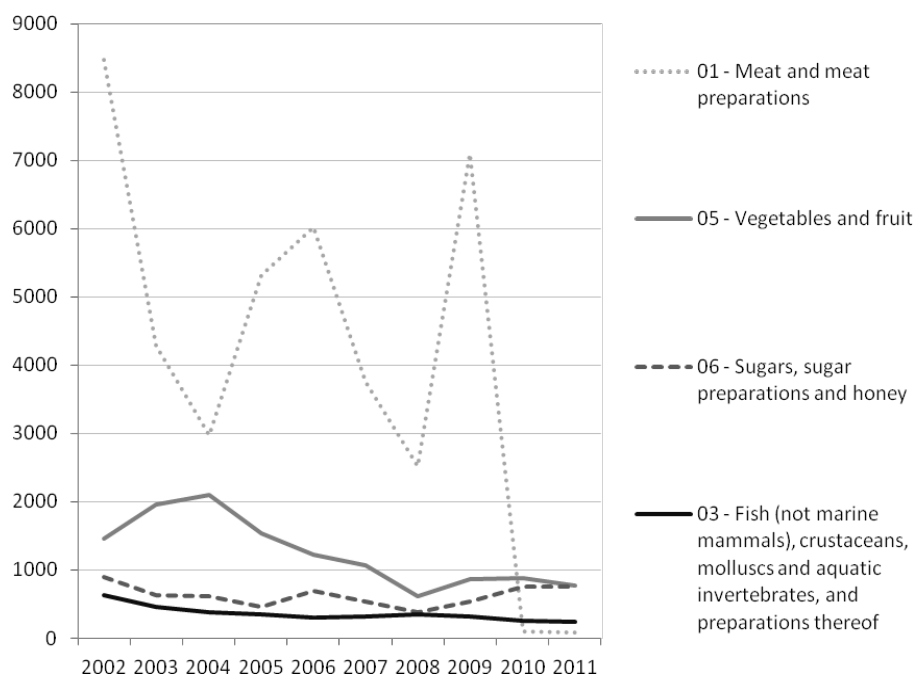
**Figure 2. Import coverage of exports (%) for “Food and live animals”**

Source: TUIK (2013)

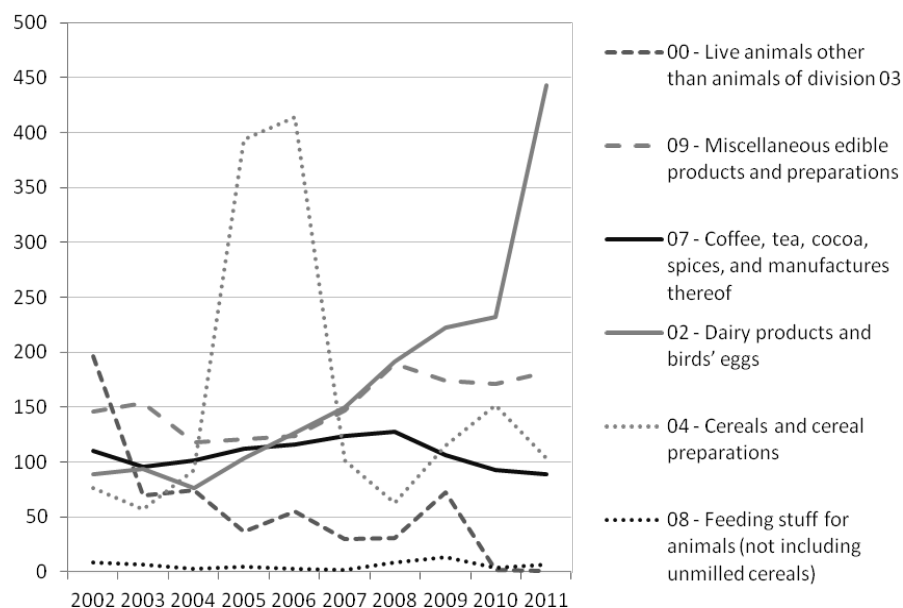
“Food and live animals” section is divided into the following divisions in SITC Rev.4:

- 00 - Live animals other than animals of division 03
- 01 - Meat and meat preparations
- 02 - Dairy products and birds' eggs
- 03 - Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof
- 04 - Cereals and cereal preparations
- 05 - Vegetables and fruit
- 06 - Sugars, sugar preparations and honey
- 07 - Coffee, tea, cocoa, spices, and manufactures thereof
- 08 - Feeding stuff for animals (not including unmilled cereals)
- 09 - Miscellaneous edible products and preparations

Import coverage of exports (%) of these sub-categories is given in Figures 3.a and 3.b. For visual simplicity, the ten categories above are displayed in two separate graphs. Figure 3.a shows the overwhelming decline in the import coverage of exports of meat and meat preparations. Besides, fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof, vegetables and fruit also display declining trends but still lie well above meat and meat preparations in 2011. In Figure 3.b, exports of cereals and cereal preparations as well as coffee, tea, cocoa, spices, and manufactures thereof are almost covering the imports of these products in 2011. However, exports of live animals other than animals of division 03 and feeding stuff for animals (not including unmilled cereals) are far from covering their imports displaying import coverage rates close to zero. Miscellaneous edible products and preparations and dairy products and birds' eggs are performing better in terms of their import coverage due to increased exports in the recent years.

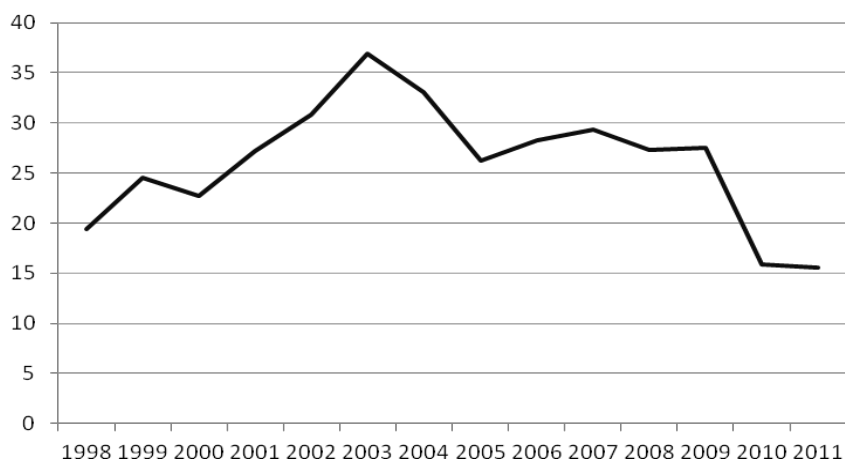


**Figure 3.a. Import coverage of exports (%) for the breakdown of “Food and live animals”**  
Source: TUIK (2013)



**Figure 3.b. Import coverage of exports (%) for the breakdown of “Food and live animals”**  
Source: TUIK (2013)

Data on organic products which mainly include agricultural products is available from the Turkish Ministry of Food, Agriculture and Livestock. Organic exports mainly include dried fruits, cereals, herbs and spices, industrial crops, fresh or processes fruits and vegetables whereas imports remain fewer and mostly limited to baby food, coffee, chocolate and animal feed. Figure 4 shows the export value of organic products between 1998 and 2011. Imports are reported not in terms of value but in volumes by the Ministry; hence we do not display the import figures here.



**Figure 4. Exports of organic products (million US dollars)**

Source: Ministry of Food, Agriculture and Livestock

<http://www.tarim.gov.tr/Sayfalar///IceriklerDetay.aspx?rid=320&NodeValue=173&KonuId=133&ListName=Ice rikler>

Having a diversified environment for organic production, Turkey is listed as one of the top ten countries globally in terms of the number of organic producers (43,000 farmers compared with 400 thousand in India) producing mainly textile crops, protein crops, and cereals (FAO, 2012: 5). Figure 4 reveals that organic exports of Turkey accelerated until 2003 and followed a declining trend thereafter. In 2011, exports declined well below their 1998 levels in US dollars. The reason for this might be the increased domestic demand for organic products rather than declining production. However this needs to be further analyzed and evaluated in another study. Data from the Ministry reveals that around 95% of organic products produced in Turkey are exported. On the other hand, imports are very few consisting of baby food, coffee and chocolate from countries such as Germany, France, Switzerland, Czech Republic, England, and Sweden.

## Discussion

The descriptive analysis shows that Turkey has gradually become import dependent in some of agricultural products such as meat and meat preparations, live animals and feeding stuff for animals. On the other hand, it has boosted its exports of miscellaneous edible products and preparations and dairy products and birds' eggs.

According to the recent data from the Ministry of Food, Agriculture and Livestock, total organic production area in Turkey increased around 800% in the last ten years. In 2002, this area was 89,827 hectares whereas it reached 702,909 hectares in 2012. In line with this, organic production escalated from 310,125 tons to 1,750,127 tons. On the other hand, Bugday Association for Supporting Ecological Living reports that a very small portion of total organic production goes to domestic consumption in Turkey. Instead, organic products are largely exported despite the declining value of exports in the recent years.

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