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Comparative advantage of agriculture sector between Turkey and European Union

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The purpose of this study is to determine the competition in agricultural sector between Turkey and European Union. For this analysis, food and agriculture trade data for 2008 are used. The Revealed Comparative Advantage Index (RCA) is calculated for the 420 agricultural items with relevance to the agricultural sector. While Turkey has comparative advantage in 95 agricultural items, European Union has comparative advantage in 186 agricultural items in 2008. European Union has more comparative advantage in agricultural items than Turkey.

Key words: Revealed comparative advantage, Balassa's index, exports

INTRODUCTION

Competition is a phenomenon that has become increasingly important in today's world. Countries have to increase their competitiveness to market their goods in the global market. The competitiveness of a country refers to an increase in its production capability and capacity on a regular basis. International competitiveness aim is to measure a firm's or country's economic performance. As we know, competition law is globalized nowadays. There are two important effective and influential competition regulation in the world: these are are United States anti-trust law and European Union competition law. Modern competition regulations have been shaped in every country's boundary that countries should adapt to their regulations quickly.

Comparative is a term that is used to explain the tendency for all countries to export or import commodities. In the mean time, a country or firm that produces a commodity at a minimum relative cost than other countries or firms should focus on the resources used for the production of that commodity. By means of trade, a country can get other commodities at a minimum or lower price (that is opportunity cost) in exchange for the commodity in which it has a comparative advantage or merits. Balassa (1965) proposed that it is neccesary to reveal a country's comparative advantage using a variety of techniques.

This paper aims to emphasize the comparative advantage between Turkey and the European Union by using international trade data for comparing exports in agricultural sector.

LITERATURE REVIEW

The comparative advantage and competitiveness of Turkish industry have been addresssed in national and international studies. Some of these studies include that of the following authors: Şahinli (2011), Karakaya and Özgen (2002), Dtm (2003), Yılmaz (2003), Altay and Gacaner (2003), Çoban and Kök (2005), Hillman (1980), (Weiss, 2004), Bowen (1983), Kojima (1970), Balassa (1965), Balassa (1977), Balassa (1986), Richardson and Zhang (1999), Yue (2001), Bender and Li (2002), and Hinloopen and Marrewijk (2004).

Şahinli (2011)'s study revealed the competitiveness of live animals for all sub-groups in Turkey and EU-27 Union Members. Within this objective, Revealed Comparative Advantage Indexes (RCA) was calculated for live animals pertaining to all sub-groups. According to Balassa's RCA, classification level for live animals category done by FAO, Turkey has no advantages and competitiveness at the market of European Union Member countries.

Altay and Gürpınar (2008)'s study aims to determine the international competitiveness of the furniture industry of Turkey. They used data for Turkish furniture industry's export and import between 2001-2006 and calculated Revealed Comparative Advantage Index (RCA), Relative Export Advantage Index (RXA), Relative Import Penetration Index (RMP) and Relative Trade Advantage Index (RTA) ect. In this study, they evaluated Turkish furniture competitive power in international trade.

Bender and Li (2002), in their study, stated that changes in comparative advantage should reflect changes in factor endowment, but increasingly, changes in trade policies also affect a region's trade performance. Based on the arguments in Balassa's stages of comparative advantage thesis, this paper looks at the performance of manufacturing exports in a number of Asian and Latin American economies over the period 1981-1997 and examines the revealed comparative advantage indices between economies in East Asia, Southeast Asia and Latin America. Although the RCA measurement may not distinguish between the factor endowment effects from the trade policy effect, we argue that RCA measures provide indication on the movement in a region's comparative advantage. The evidence strongly suggests that despite the strong export performance experienced by East Asian economies, they are losing their comparative advantage to the lower-tier economies in Southeast Asia and Latin America.

Balasssa (1977) did an analysis of comparative advantage of industrial countries between 1953 and 1971 period. His study reveals that when export diversification tends to increase with the degree of technological development, a reversal takes place at higher levels.

Yeats (1997) studied the possible distortions in trade patterns on account of discriminatory trade barriers. He shows that the RCA measure provides signal on the movement in a region's comparative advantage.

Richardson and Zhang (1999) have used the Balassa index of RCA for the U.S to analyze the patterns of variation across time, sectors and regions. They find the patterns to differ across different parts of the world and for different aggregation levels of the trade data. Differences are due to geographical immediacy of trading partners and per capita income. The influence of these factors varies over time and across sectors.

Yue (2001) uses the RCA index to demonstrate the fact that China has changed its export pattern to coincide with its comparative advantage and that there are distinct differences in export patterns between the coastal regions and the interiors in China.

Turkey's agriculture sector

Owing to structural reforms and decisive implementation of tight monetary and fiscal policies in recent period, Turkish economy achieved stability and displayed a distinguished growth performance among world economies. Gross Domestic Product (GDP) is expected to increase at an annual average rate of 7% during the planned period, and per capita income is expected to be realized as 10.100 dollars in 2013. Thus, significant progress will be recorded within the process of nominal convergence to the European Union (EU) and with its GDP reaching approximately 800 billion dollars; Turkey will rank as the 17th biggest economy in the world (MOD, 2013a).

Historically, the agricultural sector has been Turkey's largest employer and a major contributor to its GDP, exports and economic growth. According to World Bank estimates, Turkey was the world's 7th-largest agricultural producer in 2009, with agricultural GDP estimated by Turkish Statistical Institute (TurkStat) as (USD) 51 billion dollar in 2010. However, as the country develops, and with increasing urbanisation, the economy has experienced a marked change in structure, with more urban-based manufacturing and service sectors now displacing agriculture as the main drivers of economic growth (OECD, 2013).

Growth in all economic sectors was realized above expectations parallel to GDP growth in 2010, while agriculture sector growth has slowed down compared to 2009. Value added in agriculture sector was expected to stay constant in 2010. However, value added in this sector increased by 2.4%; the share of the sector in GDP decreased by 0.6 percentage points compared to the previous year and decreased to 9.5%. Value added in agriculture sector which has increased by 6.8% in the first half of the year is expected to increase by 6% in 2011, and share of the sector in total production is projected to fall to 9.3%. The high growth rate of this sector is expected to have reflection on employment and agricultural employment to increase by 5.7% in 2011. In 2012-2014, the increase of value added in agriculture sector is expected to slow down and decline to its potential level. It is anticipated that agricultural value added will increase by 2.3% on average during the programme period and the share of the sector in GDP will drop to 8.7% by the end of the period (MOD, 2013).

MATERIALS AND METHODS

Data sources

The detailed food and agriculture trade data collected, processed and disseminated by Food and Agricultural Organization (FAO), in accordance with the standard International Merchandise Trade

Statistics Methodology, are provided mainly by the national authorities and other international organizations.

The total merchandise trade value by a particular country is annually updated according to the national publications on balance of payment and trade statistics and harmonised with the consolidated figures disseminated by the Inter-Agency Common Data Set (CDS) on Total Merchandise Trade Statistics by countries (FAO, 2013).

In this study, agricultural items data for 2008 year are taken from Food and Agricultural Organization. The data are re-organized by the researcher's aim.

Application of revealed comparative advantage index (RCA)

In this study, the comparative advantage and competitiveness of Turkey agricultural sector in the global market was investigated. The Revealed Comparative Advantage Index (RCA) is calculated to determine the comparative advantage and competitiveness of the sector for pre-determined agricultural products.

Different indices have been reported to measure the strength of the competition. Among them, the Balassa Comparative Advantage Index (RCA) is the most commonly used index. In the Balassa's RCA approach, the true form of comparative advantage is assumed after the trade data are taken (Balassa, 1965). With this approach, in relation to goods or industry, Balassa tried to determine whether the country has a comparative advantage.

The Balassa index was formulated as follows:

$$RCA_{ij} = (x_{ij} / X_j) / (x_{iw} / X_w) \quad (1)$$

where; RCA_{iJ} is revealed comparative advantage index for the ith goods of the jth country; x_{ij} is jth country's ith exported goods; X_j is jth country's total exports; x_{iw} is ith goods of the global exports; X_W is total global exports

The revealed comparative advantage (RCAij) index has a relatively simple interpretation. If RCA> 1, ith goods to the jth country show that it has a comparative advantage. That is, the country's total export share in goods of interest is greater than the share in global trade. On the other hand, if RCA <1 then that the goods of interest have a comparative disadvantage.

EMPIRICAL RESULTS

The estimations for the year 2008 provide evidence on the movement in the pattern of revealed comparative advantage between Turkey and the European Union. While Turkey has a little increasing movement in comparative advantage in agricultural items, European Union has a fast increasing movement in this sector. The revealed comparative advantage index is greater than 1 (unity) for Turkey's 95 agricultural items and the remaining items are smaller than 1. Conversely, this index belongs to European Union which is greater than unity for 186 agricultural items and the remaining items are smaller than 1. It indicates that Turkey agricultural sector has significant potential for growth and development. It has shown that a good and sustainable export performance is reflected in changing comparative advantage in this sector.

In this study, the changing patterns and movements in comparative advantage of agricultural sector in Turkey is emphasized and also the movements in comparative advantage of agricultural sector with European Union are compared. European Union has comparative advantage in this sector. From the estimated results as indicated in Table 1, Turkey has potential for significant growth in this sector compared to the European Union.

RCA index values for pre-determined 420 agricultural items are shown in Table 1. For the year 2008, the RCA index varied in the range of 0 to 1.171.92. As we know, that RCA>1, the RCA index values reveal the competitiveness in relevant items. In this study, the author takes all agricultural items, calculates the RCA index values and then in ascending order sorts the agricultural items whose RCA indices are greater 1.

While the lowest RCA index of 1.12 for Turkey among 420 agricultural items is seen in cocoa powder and cake, the highest RCA index of 93.72 for Turkey is seen in dry apricots. For European Union, while the the lowest RCA index (1.01) among 420 agricultural items in Turkey is found in meat, the highest RCA index (1.171.92) is found in dry apricots (Table 1).

If the RCA index values are higher, the country will have a more superior competitiveness in the global market. We can evaluate the RCA values in line with agricultural items. The RCA values of agricultural items indicate a strong competitiveness. The RCA values for the year 2008 shows significant discrepancies and such discrepancies are critical in determining the competitiveness of a country in the global market.

CONCLUSIONS AND RECOMMENDATIONS

Along with the modernization of the economy and structural reforms, the share of the agricultural sector in total production and value-added is expected to continue to decrease. The share of agriculture sector in production, which was 18 and 11.2% on the average in the 1980 to 2000 and 2002 to 2005 periods, respectively, is projected to recede back to 7.8% in 2013; whereas the annual average growth rate of agriculture sector is expected to be 3.6% during 2007-2013 period (MOD, 2013a).

In this study, the RCA index for determining 420 agricultural items in Turkey and Euroean Union was computed for the year 2008. According to the calculations based on the Balassa's Revealed Comparative Advantage Index (RCA), Turkey was found to have an important competiveness in the agricultural items compared to the European Union.

The estimations for the year 2008 provide evidence on the movements in the model of revealed comparative advantage for Turkey and European Union. From the results, Turkey has a steadily increasing movement in comparative advantage in agriculture sector. While the RCA index values show that it is greater than unity in 95 agricultural items in Turkey, European Union has 186 agricultural items.

In this respect, Turkey's economy has been steadily growing since 2002. Turkey has many well-qualified

Table 1. RCA ındex values for agricultural items, Turkey and European Union, year 2008.

Row number	Agricultural items	Turkey	European Union
1	Dry apricots	93.72	1171.92
2	Hazelnuts shelled	89.76	1122.40
3	Figs dried	69.58	870.16
4	Quinces	38.14	477.00
5	Figs	35.36	442.13
6	Raisins	32.03	400.59
7	Prepared nuts (excludes groundnuts)	28.06	350.90
8	Flour of fruits	26.29	328.79
9	Poppy seed	22.57	282.25
10	Cotton linter	19.81	247.75
11	Cotton waste	16.17	202.23
12	Vegetables in vinegar	16.09	201.21
13	Cherries	14.10	176.34
14	Flour of wheat	13.72	171.56
15	Chick peas	13.45	168.21
16	Grapefruit (inc. pomelos)	11.97	149.70
17	Lemons and limes	11.48	143.55
18	Apricots	10.52	131.54
19	Lentils	9.30	116.32
20	Spices, (Including inter alia)	8.59	107.38
21	Processed cheese	8.25	103.13
22	Nuts, (Including inter alia)	7.43	92.86
23	Tangerines, mandarins, clem.	7.10	88.73
24	Margrine short	6.70	83.76
25	Yoghurt	6.53	81.66
26	Olives preserved	6.51	81.38
27	Tomatoes	6.37	79.71
28	Flour of mixed grain	6.24	78.08
29	Oil hydrogenated	6.12	76.58
30	Paste of tomatoes	6.04	75.49
31	Vegetables dehydrated	5.47	68.40
32	Hen eggs, in shell	5.40	67.54
33	Tobacco, unmanufactured	5.08	63.49
34	Straw husks	4.76	59.47
35	Macaroni	4.55	56.93
36	Cottonseed oil	4.55	56.84
37	Hazelnuts, with shell	4.49	56.09
38	Veg.Prod. fresh or dried	4.47	55.84
39	Apple juice, concentrated	4.42	55.33
40	Cake of Cottonseed	4.38	54.77
41	Anise, badian, fennel, corian	4.28	53.57
42	Sugar confectionery	4.13	51.68
43	Grapes	3.64	45.53
44	Cucumbers and gherkins	3.35	41.90
45	Wool degreased	3.35	41.88
46	Veg.in Tem. Preservatives	3.30	41.27
47	Cheese of skimmed cow milk	3.13	39.09
48	Oranges	3.04	38.03
49	Chestnuts	3.04	37.98
50	Fruit (Including inter alia)	3.02	37.73
51	Pumpkins, squash and gourds	2.88	35.96

Table 1. Contd.

52	Sunflower oil	2.75	34.34
53	Fruit Fresh (Including inter alia)	2.74	34.22
54	Flour of maize	2.68	33.47
55	Pastry	2.66	33.28
56	Citrus juice, single strength	2.57	32.08
57	Fruit dried (Including inter alia)	2.41	30.15
58	Fruit juice (Including inter alia)	2.34	29.32
59	Hair coarse (Including inter alia)	2.34	29.22
60	Oil of olive residues	2.26	28.28
61	Cereal preparations, (Including inter alia)	2.24	28.02
62	Chocolate Prsnes	2.23	27.88
63	Tomato Peeled	2.23	27.83
64	Breakfast Cereals	2.16	26.98
65	Juice of Tomatoes	2.15	26.88
66	Cotton Carded,Combed	2.14	26.80
67	Peaches and nectarines	2.10	26.26
68	Strawberries	2.09	26.16
69	Cottonseed	2.08	26.05
70	Chillies and peppers, green	1.99	24.84
71	Eggplants (aubergines)	1.94	24.29
72	Fat Prep (Including inter alia)	1.90	23.80
73	Tobacco products (Including inter alia)	1.90	23.71
74	Onions, dry	1.81	22.58
75	Walnuts shelled	1.79	22.33
76	Leeks, other alliaceous veg	1.77	22.13
77	Onions (includes shallots), green	1.75	21.93
78	Food prep (Including inter alia)	1.74	21.73
79	Vegetable frozen	1.68	21.00
80	Almonds shelled	1.58	19.74
81	Pistachios	1.55	19.44
82	Cigarettes	1.52	18.99
83	Sunflower seed	1.50	18.81
84	Olive oil, virgin	1.45	18.19
85	Vegetables preserved (Including inter alia)	1.45	18.14
86	Watermelons	1.40	17.54
87	Skins with wool sheep	1.39	17.37
88	Cotton lint	1.39	17.34
89	Veg.prep. or pres.frozen	1.37	17.16
90	forage Products	1.35	16.84
91	Carrots and turnips	1.28	16.03
92	Pulses, (Including inter alia)	1.18	14.80
93	Glucose and dextrose	1.18	14.72
94	Hair fine	1.17	14.64
95	Cocoa powder and cake	1.12	13.95
96	Germ of wheat	0.98	12.26
97	Skins dry salted sheep	0.98	12.21
98	Meat (Including inter alia)	0.94	11.77
99	Ice cream and edible ice	0.87	10.82
100	Leather use and waste	0.84	10.48
101	Waters, ice Et cetera	0.81	10.10
102	Fruit, nut, peel, sugar prs	0.76	9.56
103	Plums and sloes	0.76	9.55

Table 1. Contd.

104	Cream fresh	0.72	8.99
105	Spinach	0.71	8.88
106	Mixes and doughs	0.69	8.65
107	Leguminous vegetables, (Including inter alia)	0.68	8.52
108	Beer of barley	0.66	8.26
109	Mushrooms and truffles	0.66	8.21
110	Broad beans, horse beans, dry	0.65	8.18
111	Maize oil	0.65	8.13
112	Olives	0.64	7.96
113	Lemon juice, single strength	0.61	7.58
114	Beverage non-alcoholic	0.60	7.47
115	Chicken meat	0.59	7.35
116	Other fructose and syrup	0.56	6.96
117	Sheep	0.55	6.86
118	Dried mushrooms	0.54	6.80
119	Food wastes	0.54	6.78
120	Cocoa butter	0.54	6.69
121	Bran of maize	0.49	6.08
122	Whey dry	0.48	6.01
123	Flour of pulses	0.45	5.67
124	Flour of rye	0.45	5.67
125	Other melons (inc.cantaloupes)	0.44	5.46
126	Juice of pineapples	0.43	5.33
127	Sugar, (Including inter alia)	0.42	5.23
128	Vanilla	0.38	4.75
129	Crude materials	0.38	4.71
130	Cheese of sheep milk	0.37	4.68
131	Beans, green	0.36	4.52
132	Dates	0.36	4.50
133	Pears	0.35	4.32
134	Fatty acids	0.34	4.27
135	Chillies and peppers, dry	0.34	4.25
136	Cabbages and other brassicas	0.34	4.21
137	Bran of wheat	0.33	4.10
138	Plums dried (prunes)	0.32	4.03
139	Potatoes	0.31	3.87
140	Oil of vegetable origin, (Including inter alia)	0.30	3.79
141	Cocoa paste	0.29	3.58
142	Milk whole cond	0.28	3.46
143	Offals liver turkeys	0.26	3.29
144	Sesame seed	0.26	3.28
145	Fine goat hair	0.26	3.28
146	Veg prod for feed	0.26	3.22
147	Wool, greasy	0.26	3.21
148	Citrus juice, concentrated	0.25	3.11
149	Tea	0.25	3.07
150	Apples	0.23	2.92
151	Cake of rapeseed	0.22	2.70
152	Honey, natural	0.21	2.66
153	Fibre crops (Including inter alia)	0.20	2.56
154	Grape juice	0.20	2.53
155	Chickens	0.19	2.40

Table 1. Contd.

156	Beans, dry	0.19	2.39
157	Vegetables fresh (Including inter alia)	0.19	2.32
158	Bread	0.18	2.30
159	Prepared groundnuts	0.18	2.29
160	Lettuce and chicory	0.18	2.26
161	Milk skm of cows	0.18	2.25
162	Coffee subst. cont.coffee	0.17	2.14
163	Meat Extracts	0.16	2.01
164	Triticale	0.15	1.90
165	Sausages of pig meat	0.15	1.88
166	Apple juice, single strength	0.14	1.76
167	Bever. dist .alcoholic	0.14	1.75
168	Homogen. cooked fruit preparations	0.14	1.70
169	Wool; hair waste	0.13	1.65
170	Gums natural	0.13	1.63
171	Skins wet salted calves	0.13	1.60
172	Homogen. meat preparations	0.12	1.52
173	Orange juice, single strength	0.12	1.52
174	Malt	0.12	1.46
175	Hides (Including inter alia)	0.12	1.45
176	Maize	0.11	1.40
177	Coffee extracts	0.11	1.39
178	Sweet corn frozen	0.11	1.36
179	Bran of cereals	0.10	1.27
180	Cheese of whole cow milk	0.09	1.16
181	Butterm., curdled, acid. milk	0.09	1.12
182	Hair carded/ combed	0.09	1.11
183	Infant Food	0.09	1.11
184	Food prep, flour, malt extract	0.09	1.09
185	Soybean oil	0.08	1.06
186	Turkey meat	0.08	1.01
187	Maize, green	0.07	0.90
188	Beet pulp	0.07	0.86
189	Preparations of beef meat	0.07	0.83
190	Oil of castor beans	0.06	0.78
191	Citrus fruit, (Including inter alia)	0.06	0.75
192	Rapeseed oil	0.06	0.73
193	Bran of mixed grains	0.06	0.72
194	Hemp tow waste	0.06	0.70
195	Pepper (Piper spp.)	0.05	0.67
196	Beeswax	0.05	0.67
197	Flax fibre raw	0.05	0.66
198	Coffee roasted	0.05	0.62
199	Cinnamon (canella)	0.05	0.58
200	Oil Boiled et cetera	0.05	0.57
201	Cauliflowers and broccoli	0.04	0.56
202	Peas, green	0.04	0.56
203	Wafers	0.04	0.53
204	Sugar refined	0.04	0.50
205	Jute	0.04	0.46
206	Orange juice, concentrated	0.03	0.42
207	Oilseeds, (Including inter alia)	0.03	0.41

Table 1. Contd.

208	Wine	0.03	0.41
209	Sour cherries	0.03	0.40
210	Flour of roots and tubers	0.03	0.39
211	Frozen potatoes	0.03	0.38
212	Cake of soybeans	0.03	0.36
213	Rubber natural dry	0.03	0.36
214	Butter cow milk	0.03	0.35
215	Malt extract	0.03	0.35
216	Meat of chicken canned	0.03	0.34
217	Sweet corn prep or preserved	0.03	0.32
218	Milk whole dried	0.02	0.31
219	Flax fibre and tow	0.02	0.30
220	Coconuts	0.02	0.28
221	Extracts tea, mate, prep	0.02	0.27
222	Coconuts desiccated	0.02	0.27
223	Cloves	0.02	0.27
224	Cow milk, whole, fresh	0.02	0.27
225	Pineapple juice conc.	0.02	0.26
226	Oats Rolled	0.02	0.25
227	Cattle meat	0.02	0.24
228	Horses	0.02	0.23
229	Alfalfa meal and pellets	0.02	0.23
230	Peas, dry	0.02	0.22
231	Flour of mustard	0.02	0.21
232	Almonds, with shell	0.02	0.20
233	Flax tow waste	0.02	0.20
234	Milk skimmed dry	0.02	0.20
235	Hides wet salted cattle	0.02	0.20
236	Milk Skimmed cond	0.02	0.19
237	Wheat	0.02	0.19
238	Cider Et cetera	0.01	0.18
239	Gluten feed and meal	0.01	0.18
240	Garlic	0.01	0.17
241	Prepared meat (Including inter alia)	0.01	0.17
242	Canned mushrooms	0.01	0.16
243	Flour of oilseeds	0.01	0.15
244	Potatoes Flour	0.01	0.15
245	Homogen.Veget.Prep	0.01	0.15
246	Soya sauce	0.01	0.15
247	Cake of Oilseeds, (Including inter alia)	0.01	0.15
248	Meat of beef,dried, salted,smoked	0.01	0.14
249	Olive residues	0.01	0.14
250	Canary seed	0.01	0.14
251	Spermaceti	0.01	0.14
252	Milk Whole Evp	0.01	0.13
253	Rice flour	0.01	0.13
254	Pet food	0.01	0.11
255	Maple sugar and syrups	0.01	0.11
256	Dregs from brewing;dist.	0.01	0.10
257	Offals liver chicken	0.01	0.10
258	Peanut butter	0.01	0.09
259	Bran of pulses	0.01	0.08

Table 1. Contd.

260	Ginger	0.01	0.08
261	Grapefruit juice, concentrated	0.01	0.07
262	Groundnuts, with shell	0.01	0.07
263	Natural rubber	0.01	0.07
264	Mustard seed	0.01	0.07
265	Cashew nuts shelled	0.01	0.07
266	Waxes vegetable	0.01	0.07
267	Groundnuts shelled	0.01	0.07
268	Nutmeg, mace and cardamoms	0.00	0.06
269	Linseed	0.00	0.06
270	Mixed grain	0.00	0.06
271	Offals of sheep, edible	0.00	0.06
272	Millet	0.00	0.06
273	Offals of cattle, edible	0.00	0.05
274	Cranberries	0.00	0.05
275	Meal Meat	0.00	0.05
276	Roots and tubers, (Including inter alia)	0.00	0.05
277	Sheep meat	0.00	0.05
278	Meat dried (Including inter alia)	0.00	0.05
279	Skin furs	0.00	0.05
280	Avocados	0.00	0.05
281	Linseed oil	0.00	0.05
282	Kiwi fruit	0.00	0.04
283	Coconut (copra) oil	0.00	0.04
284	Lactose	0.00	0.04
285	Cocoa beans	0.00	0.03
286	Cocoon Unr. and waste	0.00	0.03
287	Molasses	0.00	0.03
288	Prod.of natural milk constituent	0.00	0.03
289	Walnuts, with shell	0.00	0.02
290	Tallow	0.00	0.02
291	Bananas	0.00	0.02
292	Eggs liquid	0.00	0.01
293	Sunflower cake	0.00	0.01
294	Grease incl. lanolin wool	0.00	0.01
295	Sorghum	0.00	0.01
296	Meat-cattle boneless (Beef and Veal)	0.00	0.01
297	Silk raw	0.00	0.01
298	Palm oil	0.00	0.00
299	Eggs dried	0.00	0.00
300	Soybeans	0.00	0.00
301	Coffee, green	0.00	0.00
302	Pineapples cand	0.00	0.00
303	Asparagus	0.00	0.00
304	Mangoes, mangosteens, guavas	0.00	0.00
305	Pineapples	0.00	0.00
306	Animals live (Including inter alia)	0.00	0.00
307	Arecanuts	0.00	0.00
308	Artichokes	0.00	0.00
309	Asses	0.00	0.00
310	Bacon and ham	0.00	0.00
311	Barley	0.00	0.00

Table 1. Contd.

312	Barley flour and grits	0.00	0.00
313	Barley pearled	0.00	0.00
314	Beehives	0.00	0.00
315	Beets for fodder	0.00	0.00
316	Berries (Including inter alia)	0.00	0.00
317	Bird meat, (Including inter alia)	0.00	0.00
318	Bran of rice	0.00	0.00
319	Brazil nuts shelled	0.00	0.00
320	Brazil nuts, with shell	0.00	0.00
321	Buckwheat	0.00	0.00
322	Cake of copra	0.00	0.00
323	Cake of groundnuts	0.00	0.00
324	Cake of linseed	0.00	0.00
325	Cake of maize	0.00	0.00
326	Cake of sesame seed	0.00	0.00
327	Camels	0.00	0.00
328	Carobs	0.00	0.00
329	Cashew nuts, with shell	0.00	0.00
330	Cassava dried	0.00	0.00
331	Cattle	0.00	0.00
332	Cereals, (Including inter alia)	0.00	0.00
333	Cigars cheroots	0.00	0.00
334	Cocoahusks; shell	0.00	0.00
335	Coffee husks and skins	0.00	0.00
336	Coir	0.00	0.00
337	Copra	0.00	0.00
338	Currants	0.00	0.00
339	Degras	0.00	0.00
340	Duck meat	0.00	0.00
341	Ducks	0.00	0.00
342	Fat liver prep (Foie Gras)	0.00	0.00
343	Fat of pigs	0.00	0.00
344	Fat of Poultry	0.00	0.00
345	Fruit tropical dried (Including inter alia)	0.00	0.00
346	Fruit, tropical fresh (Including inter alia)	0.00	0.00
347	Geese and guinea fowls	0.00	0.00
348	Germ of maize	0.00	0.00
349	Ghee, butter oil of cow milk	0.00	0.00
350	Goat meat	0.00	0.00
351	Goats	0.00	0.00
352	Groundnut oil	0.00	0.00
353	Hair of horses	0.00	0.00
354	Hempseed	0.00	0.00
355	Hides dry salted (Including inter alia)	0.00	0.00
356	Hides wet salted buffaloes	0.00	0.00
357	Hides wet salted horses	0.00	0.00
358	Hides wet salted (Including inter alia)	0.00	0.00
359	Hides dry S. Cattle	0.00	0.00
360	Hops	0.00	0.00
361	Horse meat	0.00	0.00
362	Juice of grapefruit	0.00	0.00
363	Juice of vegetables (Including inter alia)	0.00	0.00

Table 1. Contd.

364	Karakul skins	0.00	0.00
365	Karite nuts (Sheanuts)	0.00	0.00
366	Lard	0.00	0.00
367	Lard stearine oil	0.00	0.00
368	Karakul skins	0.00	0.00
369	Karite nuts (sheanuts)	0.00	0.00
370	Lard	0.00	0.00
371	Lard stearine oil	0.00	0.00
372	Liver prep.	0.00	0.00
373	Manila fibre (abaca)	0.00	0.00
374	Maté	0.00	0.00
375	Melonseed	0.00	0.00
376	Mules	0.00	0.00
377	Must of grapes	0.00	0.00
378	Oats	0.00	0.00
379	Offals liver geese	0.00	0.00
380	Offals of horses	0.00	0.00
381	Offals of pigs, edible	0.00	0.00
382	Oil of jojoba	0.00	0.00
383	Oil of tung nuts	0.00	0.00
384	Oils, fats of animal (Including inter alia)	0.00	0.00
385	Okra	0.00	0.00
386	Other bird eggs,in shell	0.00	0.00
387	Palm kernel oil	0.00	0.00
388	Palm kernels	0.00	0.00
389	Papayas	0.00	0.00
390	Pig meat	0.00	0.00
391	Pigeons, other birds	0.00	0.00
392	Pork	0.00	0.00
393	Prep of pig meat	0.00	0.00
394	Rabbits and hares	0.00	0.00
395	Rapeseed	0.00	0.00
396	Raspberries	0.00	0.00
397	Res. fatty subs	0.00	0.00
398	Rye	0.00	0.00
399	Safflower seed	0.00	0.00
400	Sesame oil	0.00	0.00
401	Silk-worm cocoons, reelable	0.00	0.00
402	Skins wet salted goats	0.00	0.00
403	Skins dry s.calves	0.00	0.00
404	Skins dry salted goat	0.00	0.00
405	Skins wet salted	0.00	0.00
406	Skins wet salted pigs	0.00	0.00
407	Stone fruit, (Including inter alia)	0.00	0.00
408	String beans	0.00	0.00
409	Sugar beet	0.00	0.00
410	Sugar cane	0.00	0.00
411	Sugar raw centrifugal	0.00	0.00
412	Sweet potatoes	0.00	0.00
413	Tapioca of potatoes	0.00	0.00
414	Taro (cocoyam)	0.00	0.00
415	Turkeys	0.00	0.00

Table 1. Contd.

416	Buffaloes	NA	NA
417	Cheese of goat milk	NA	NA
418	Coarse goat hair	NA	NA
419	Hides dry salted horses	NA	NA
420	Vetches	NA	NA

Source: FAO, 2013; NA, Missing value.

agricultural engineers, employees, sufficient and necessary infrastructure, and good geographic conditions, which create important opportunities for Turkey in the current global market. However, in order to maintain and further improve its competiveness, Turkey should give priorities to improving existing infrastructure and productivity.

In order to give a boost to these major contributions of national economy, every logical competitive projects should also be supported and tax ratios should also be revived according to European Union and world regulations.

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