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**Working Paper**

## Assessing Kosovo's horticultural potential: the market for fruit and vegetables on the Balkans

Discussion Paper, No. 67

**Provided in Cooperation with:**

Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Halle (Saale)

*Suggested Citation:* Fischer, Christian (2004) : Assessing Kosovo's horticultural potential: the market for fruit and vegetables on the Balkans, Discussion Paper, No. 67, Institute of Agricultural Development in Central and Eastern Europe (IAMO), Halle (Saale),  
<https://nbn-resolving.de/urn:nbn:de:gbv:3:2-22297>

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# **DISCUSSION PAPER**

## **Institute of Agricultural Development in Central and Eastern Europe**

### **ASSESSING KOSOVO'S HORTICULTURAL POTENTIAL – THE MARKET FOR FRUIT AND VEGETABLES ON THE BALKANS**

**CHRISTIAN FISCHER**

**DISCUSSION PAPER No. 67  
2004**



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## SUMMARY

Kosovo had been a net exporter – at least of some – fruit and vegetables in the former Federal Republic of Yugoslavia before the civil war. Current reconstruction efforts therefore focus on restoring the past horticultural potential of the now independent province. This paper analyses the competitiveness of the Kosovar fruit and vegetable sector. By calculating average net trade flows during 1996-2000 for more than 20 individual fruit and vegetables and seven aggregates, demand potentials for the Balkan regional market are identified for potatoes, lettuce, garlic, dried beans and pears. In addition, average export unit values are calculated as price proxies in order to assess export price competitiveness in the region. While demand potentials for locally produced fruit and vegetables clearly exist, the paper concludes that the overall competitive position of Kosovo's horticultural sector seems rather weak at the moment.

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JEL: D 40, F 14, O 52, Q 00; Q 11, Q 17

Keywords: Kosovo, Balkans, horticulture, market analysis, export potential, agriculture in international trade, agricultural and natural resource economies, aggregate supply and demand analysis, prices

## ZUSAMMENFASSUNG

### DIE BEWERTUNG DES GARTENBAULICHEN POTENZIALS DES KOSOVO – DER MARKT FÜR OBST UND GEMÜSE AUF DEM BALKAN

Vor dem Bürgerkrieg in der ehemaligen Bundesrepublik Jugoslawien war der Kosovo ein Netto-Exporteur von – zumindest einigen – Obst- und Gemüsesorten. Aus diesem Grund konzentrieren sich die gegenwärtigen Wiederaufbaubemühungen auf die Wiederherstellung des damaligen gartenbaulichen Potenzials der nun unabhängigen Provinz. Dieses Discussion Paper analysiert die Wettbewerbsfähigkeit des Obst- und Gemüsesektors des Kosovo. Durch die Berechnung von 5-Jahres-Durchschnitts-Nettohandelsströmen (1996-2000) von mehr als 20 verschiedenen Obst- und Gemüsesorten und sieben Aggregaten werden Nachfragepotenziale in der Balkanregion für Kartoffeln, Blattsalat, Knoblauch, getrocknete Bohnen und Birnen identifiziert. Darüber hinaus werden durchschnittliche Exporteinheitswerte ("Unit Values") als Preisindikatoren berechnet, um die Exportpreis-Wettbewerbsfähigkeit in der Region zu bewerten. Obwohl Nachfragepotenziale nach heimischen Obst- und Gemüseprodukten tatsächlich nachgewiesen werden können, zeigt die Schlussbetrachtung der vorliegenden Arbeit, dass die Gesamtwettbewerbs-fähigkeit des Gartenbausektors im Kosovo gegenwärtig als eher schwach zu beurteilen ist.

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JEL: D 40, F 14, O 52, Q 00; Q 11, Q 17

Schlüsselwörter: Kosovo, Balkan, Marktanalyse, Nachfragepotential, Internationaler Agrarhandel, Agrar- und Ressourcenökonomie, Analysen des aggregierten Angebots und der aggregierten Nachfrage, Preise



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## 1 INTRODUCTION

Kosovo is the poorest (former and now autonomous) province of the Federal Republic of Yugoslavia (soon to be the 'Union of Serbia and Montenegro'), with a current population of about two million people. Conflict-related damage has hampered economic growth, which is compounded by the poor state of infrastructure, inadequate energy supplies and depleted capital stock. The recent war most severely affected housing, agriculture, and telecommunications. More than 50 % of agricultural assets were reportedly damaged or lost. According to a World Bank assessment, the replacement value of animal losses and destroyed or damaged farm buildings and agricultural machinery is estimated to amount to about US\$ 737m (WORLD BANK, 2000). The lack of clear laws governing ownership of agri-processing 'kombinats' has led to slow reconstruction and investment in state-owned enterprises and the lack of credit and financing is a major problem for any agricultural producer. In addition, a regional drought hit the Balkans in 2000, which made things even worse (USDA, 2001). Given the poverty level, subsistence farming – especially in fruit and vegetables (f&v) – is assumed to be high.

Historically, while Kosovo has been a net importer of food and agricultural products like wheat (WORLD BANK, 2002), the province had had trade surpluses in horticultural products such as apples, plums, cabbage and beans (MAFRD, 2002). From a botanical point of view, Kosovo harbours a variety of autochthonic cultivars and wild growing vegetables as for instance onion, leek, beans, peppers (*capsicum*s), watermelon and tomatoes (ILIC et al., 1997). However, due to the damages caused by the war Kosovo has become a net importer of almost all horticultural products despite its comparative production advantage which it may possess in at least some corps.

The aim of current reconstruction efforts and long-term agricultural development strategies is therefore to rebuild the role of the horticultural sector for both feeding Kosovar people while providing them with jobs and income, and earning foreign exchange by supplying neighbouring states with surplus fruit and vegetables production (KACI, 2002).

The objective of this study is to look at the main markets surrounding Kosovo in order to analyse the chances of Kosovo's fruit and vegetables producers to access these regional markets, or to compete against imports into their own province. As surrounding countries are specified the now independent states of the former Yugoslavia – ie, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Montenegro, Macedonia – and the Balkan countries Albania, Greece and Turkey.

The structure of this paper is as follows: first, the current situation of Kosovo's agriculture and its fruit and vegetable sector is described. Then regional trade of more than 20 individual fruit and vegetables (and seven aggregates) is analysed in order to assess the availability of these products on the Balkan regional market. In addition, mean export unit values are presented as a measure of the (price) competitiveness of the different countries which export fruit and vegetables. The last section summarises and concludes.

## 2 KOSOVO'S HORTICULTURAL SECTOR

This section presents information about the current state of Kosovo's agricultural sector in general and its horticulture industry in particular. Since there are few official statistics, and the data they contain is not always reliable, some estimates must be made.

## 2.1 Production

Agriculture's contribution to GDP in 1995 was about \$ 213m, or about 30 %, according to Kosovo's Ministry of Agriculture, Forestry and Rural Development (MAFRD, 2002b).

Land use for horticultural production in Kosovo in 2000 was 47,700 hectares (ha), according to MAFRD data. This represents 8.3 % of the total agricultural land of 577,000 ha. More specifically, vegetables were grown on 24,000 ha (4.2 %), potatoes on 9,300 ha (1.6 %), fruits on 11,400 ha (2.0 %) and vines on 3,000 ha (0.5 %) (MAFRD, 2002a).

Small-scale production on private land is most important for fruit and vegetables. Only about 370 ha for vegetables and about 200 ha of fruit trees are held by the big socially owned enterprises which in total use 4,601 ha of the total agricultural land – ie, about 10 % (*Ibid.*).

Production data of individual vegetables are listed in the following Table 1. As it can be seen, the production of peppers was most important as measured by land use, followed by tomatoes and watermelons. However, production in 2001 was significantly down as compared to the 1996 pre-war levels, in particular for cabbages, onions and tomatoes.

**Table 1: Production of some selected vegetables in Kosovo, 1996 and 2001**

|                                       | Peppers | Tomatoes | Onions | Cabbages | Watermelon |
|---------------------------------------|---------|----------|--------|----------|------------|
| Area (1,000 ha) - 2001                | 3,619   | 1,431    | 1,397  | 918      | 1,505      |
| Area (1,000 ha) - 1996                | 3,764   | 2,740    | 3,008  | 2,855    | 1,768      |
| Production (1,000 metric tons) - 1996 | 31.0    | 32.8     | 14.9   | 32.8     | 23.4       |
| Yield (mt/ha) - 1996                  | 8.2     | 9.0      | 4.8    | 11.5     | 13.2       |

Source: Statistical Office of Kosovo, reproduced in MAFRD (April 2002): Opportunities of investment in the subsector fruits and vegetables in Kosovo, Pristina, p. 5.

Production levels of individual fruits can be seen from the following Table 2. More recent data have not been available. Plums were most important in that year, followed by apples and pears.

**Table 2: Production of some selected fruits in Kosovo, 1996**

|                          | Plums  | Apples | Pears | Sour cherries |
|--------------------------|--------|--------|-------|---------------|
| Bearing trees (million)  | 1.4    | 0.7    | 0.4   | 0.6           |
| Production (metric tons) | 24,000 | 16,000 | 7,000 | 2,800         |

Source: Statistical Office of Kosovo, reproduced in MAFRD (April 2002): Opportunities of investment in the subsector fruits and vegetables in Kosovo, Pristina, p. 4.

## 2.2 Consumption

Overall total consumption of fruit and vegetables in Kosovo in 2001 has been estimated at about € 315m, based on food budget data collected by a survey of private urban households ( $n = 1,026$ ) which was mandated by the development NGO Intercooperation (2001)<sup>1</sup>.

<sup>1</sup> Consumption data of individual fruit and vegetables in this study were collected in terms of 'quantities of produce purchased per week per household'. Unfortunately, it is not possible to directly transform these figures into 'annual per capita consumption', the measure that is commonly used to describe consumption.

The division of total consumption into fresh and processed fruit and vegetables has been found to be: fresh vegetables (42 %), fresh fruit (34 %), processed fruit (14 %) and processed vegetables (10 %) (*Ibid.*).

The most popular fruit and vegetables are apples (17 % of total fresh fruit consumption), followed by bananas (14 %) and peaches (8 %) for fruits, and tomatoes (17 % of fresh vegetable consumption), peppers (16 %) and potatoes (10 %) for vegetables (*Ibid.*).

### 2.3 Trade

Official data about imports into Kosovo are collected by UNMIK and reported on a monthly basis. However, the main problems with these data are that they do not take into account all points of entry. In particular, imports from Serbia are not or not completely included in the official figures. Also, since imports are counted in terms of trucks, the data are not listed by individual commodities but often by combined commodities such as 'apples & onions' etc. All this makes analysis of the official data difficult.

The import situation in 2001 for fruit and vegetables is nevertheless reported in Table 3. Imports are specified in volume and value terms. Out of the total imports of about € 480m, food and drink items hold a share of about 25 % (ie, € 119m) and f&v of 3.7 % (ie, € 18m). The (monthly) raw data shows that these shares vary between a minimum of 1.2 % for f&v (6.4 % for food & drink) in September and a maximum of 6.1 % (20.7 %) in June respectively.

**Table 3: Selected imports into Kosovo, 2001, in value and volume terms**

| Total imports                                       | €uro '000 | Metric tons* '000 |
|---|-----------|-------------------|
| Fruit and vegetables                                | 17,619.7  | 71.9              |
| Food & drinks**                                     | 119,303.9 | 270.8             |
| Overall imports                                     | 481,293.0 | 1,296.7           |
| Shares  | %         |                   |
| Food & drink** imports in total imports             | 24.8      | –                 |
| Fruit & vegetable imports in total imports          | 3.7       | –                 |
| Fruit & vegetable imports in food & drink** imports | 14.8      | –                 |

Notes: \* Excludes data for May which was not available;

\*\* Excluding live animals, feed, chewing gum and tobacco.

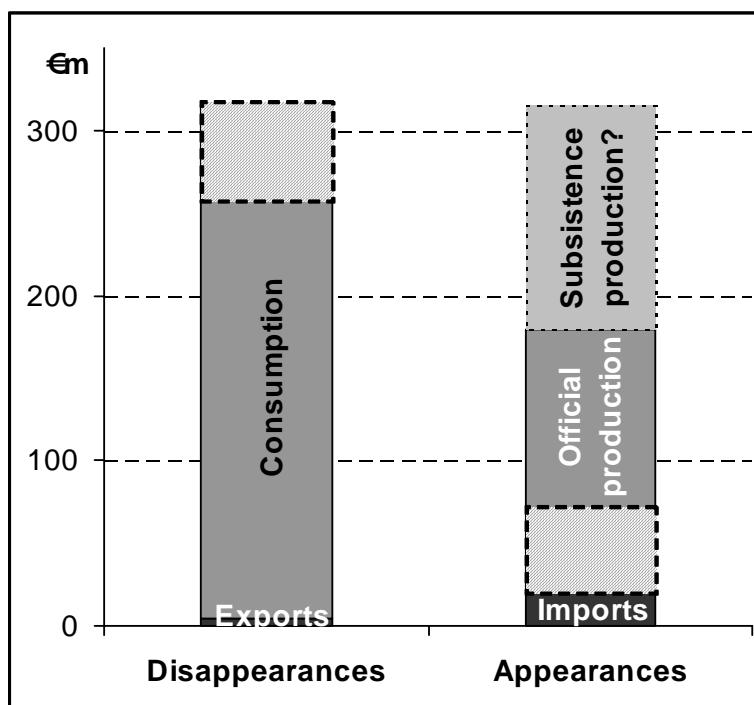
Source: Own calculations based on UNMIK CUSTOMS SERVICE, Import statistics, January-December 2001.

The available volume data for 2001 do not contain the month of May, unfortunately. However, in using the other months' volume figures and in comparing them with the import values it is possible to estimate May's volume at about 12,000 metric tons which results in a total of f&v imports of about 84,000 mt in 2001.

Overall, it becomes clear that in 2001 imports of f&v represented only a small proportion (less than 5 %) of the overall imports into Kosovo.

Exports of fruit and vegetables have not been registered officially in 2001 but there is a strong assumption by officials that if there were any they were negligible.

**Figure 1:** The horticultural sector in Kosovo (€m), 2001



Source: Own draft based on data from Intercooperation, official statistical data and estimates.

Concerning the produce appearance side (see right-hand column of Figure 1), official imports of about € 17m seem to be too small, as discussed above. It may therefore be justified to allow for a higher figure, perhaps as high as double the official one, by taking imports from Serbia and other unregistered commodity flows into account. The size of the official horticultural production can only be estimated by taking the above mentioned figure on agriculture's contribution to GDP as a base. A \$ 213m in 1995 may then translate into something like € 200m in 2001, taking war damage (decreasing effect) and inflation (increasing effect) into consideration. Since horticultural commodities are, in general, high-value goods, and given the traditional overall significance of this agricultural sub-sector, it may be justified to estimate the official annual horticultural output at up to € 100m. The rest, which makes up the difference between total produce appearance and disappearance<sup>2</sup>, can then only be subsistence production – ie, private household production for own personal consumption. This activity may have accounted for between € 60m and € 120m in Kosovo in 2001.

Overall, it becomes clear that Kosovo's horticultural sector is currently heavily import dependent and characterised by subsistence farming, the estimated value of which may even have exceeded official production in 2001.

### 3 THE BALKAN REGIONAL MARKET FOR FRUIT AND VEGETABLES

This section of the paper analyses the Balkan regional market for fruit and vegetables. First, a regional trade analysis is performed in order to identify potential demand for Kosovar producers. Then, in order to assess the conditions with which competitor countries market their horticultural produce internationally, export unit values – as proxies for average export prices – are calculated.

<sup>2</sup> It is abstracted here from potentially existing stocks (inventories) of horticultural commodities due to the lack of available data. Also, because many horticultural commodities are highly perishable, stocks can generally be assumed as low in relation to production and consumption.

### 3.1 Demand potentials

The analysis of trade flows has the distinct advantage that it takes supply and demand simultaneously into account. This is in particular true if net trade flows (ie, exports - imports) are calculated which give an indication whether a country consumes more than it produces of a particular commodity (in which case the country is a net importer) or vice versa, in which case it is a net exporter. However, since trade in horticultural products can be highly volatile, the figure of one single year may be misleading. This problem can be solved by calculating averages for several years. In the following tables 4 to 6 five year means (1996-2000) of net trade flows for the above mentioned countries and several fruit and vegetables are listed.

**Table 4: Net trade (exports-imports) of fruit and vegetables in selected Balkan countries, \$ m, 1996-2000 annual averages**

|                    | Fruit & vegetab. | Fruit fresh nes | Fruit prep nes | Veg. prep or pres | Vegetab. fresh nes | Vegetab. frozen | Vegetables prep nes |
|--------------------|------------------|-----------------|----------------|-------------------|--------------------|-----------------|---------------------|
| Slovenia           | -110.1           | -0.9            | -7.4           | -0.2              | -0.7               | -3.2            | -3.9                |
| Croatia            | -121.5           | -1.0            | -6.2           | -0.2              | -0.8               | -2.5            | -3.0                |
| Bosnia-Herzegov.   | -26.1            | -0.3            | 1.3            | -                 | -1.2               | -0              | -2.4                |
| FR Yugoslavia      | 4.1              | -0.8            | 82.0           | 0.2               | -4.5               | 5.2             | 1.8                 |
| Macedonia          | 18.4             | -               | -2.6           | 0.2               | 6.2                | 1.3             | 0.8                 |
| Albania            | -29.0            | -0.1            | -0.3           | -0                | -0                 | -0.4            | -0.4                |
| Greece             | 749.8            | -0.2            | 268.7          | 0                 | -1.3               | -7.3            | 7.8                 |
| Turkey             | 2,035.9          | 2.2             | 106.1          | 2.0               | 1.3                | 22.2            | 12.0                |
| All above countr.* | 2,521.6          | -1.2            | 441.6          | 2.0               | -1.1               | 15.3            | 12.6                |

Notes: Nes = not elsewhere specified, prep = prepared, pres = preserved. 0 = <±\$ 100,000. \* Differences possible due to rounding. Shadowed cells indicate net imports – ie, demand potentials.

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

From Table 4 it becomes clear that the Balkan region is a net exporter of annually about \$ 2.5 billion of fruit and vegetables (first column), indicating a competitive advantage for this agricultural activity. However, having a closer look at the different countries reveals that only Turkey, Greece, Macedonia and to a far lesser extent FR Yugoslavia are net exporters, while Croatia, Slovenia, Albania, and Bosnia-Herzegovina consume more f&v than they produce by themselves. Thus the large export surplus is mainly generated by Turkey and Greece and the exports of these two countries could easily cover the demand of the other neighbouring Balkan countries. However, in particular Greece and Turkey also export heavily into the EU and other world markets (AKKAYA, 2000; EU COMMISSION, 2000), were higher prices can be achieved, thus making it less clear whether there exists regional demand which is not yet met. Therefore it is necessary to look at individual commodities. The remainder of Table 4 lists other more or less aggregated produce groups, and as it becomes clear there is demand of about \$ 1.2m annually in the region for fresh fruit nes (ie, not elsewhere specified, including for instance exotic and tropical fruits such as elderberry, rose hips, litchi or pawpaw) in almost all countries except for Turkey and of \$ 1.1m of fresh vegetables nes (eg, chards, celery, fennel, parsley, rhubarb etc) except for Macedonia and Turkey. There seems also to be a limited demand for frozen vegetables in Greece (\$ 7.3m), Slovenia (\$ 3.9m), Croatia (\$ 3.0m) and Albania (\$ 0.4m), since much of the Turkish surplus is probably exported elsewhere as mentioned above.

Regional demand for specific fruits exists according to Table 5 only for pears (\$ 8.3m annually) in all analysed countries apart from Turkey and FR Yugoslavia and for apples in all countries except for Turkey, Macedonia and Slovenia. For all other fruits, production in the region ex-

seeds consumption by far, thus reducing success chances for new orchards unless the crops can be sold outside the local Balkan area. Looking at the country total (last column) it becomes clear that there are three major fruit suppliers in the region: Greece, Turkey and Macedonia. All other countries are net importers of fruits.

**Table 5:** Net trade (exports-imports) of some fruits in selected Balkan countries, \$ m, 1996-2000 annual averages

|                   | Apples | Pears | Cherries | Plums | Grapes | Peaches, nectarines | Apricots | Strawberries | Raspberries | Watermelons | Total* |
|-------------------|--------|-------|----------|-------|--------|---------------------|----------|--------------|-------------|-------------|--------|
| Slovenia          | 1.1    | -0.6  | -0.2     | -0.1  | -5.2   | -2.1                | -2.0     | -0.4         | 0           | -1.8        | -11.3  |
| Croatia           | -3.9   | -2.0  | -0.3     | -0.5  | -4.9   | -4.0                | -1.1     | -0.8         | -           | -1.6        | -19.1  |
| Bosnia-Herzeg.    | -3.2   | -0.4  | -        | 0.3   | -1.0   | -0.5                | -        | -            | -           | -0.5        | -5.5   |
| FR Yugoslavia     | -1.0   | 0.3   | -        | 0.1   | -2.8   | 0.2                 | -0       | -0           | 1.0         | -2.8        | -4.9   |
| Macedonia         | 9.8    | -0    | -0       | 0     | 4.2    | -0.5                | 0        | 0            | 0           | 1.4         | 14.9   |
| Albania           | -5.3   | -0.3  | -0       | -0    | -1.4   | -2.3                | -0       | -0           | -           | -0.2        | -9.5   |
| Greece            | -2.6   | -8.8  | 8.7      | -0.3  | 113.1  | 30.6                | 6.7      | -0.3         | 0           | 30.8        | 177.7  |
| Turkey            | 15.8   | 3.6   | 26.5     | 1.9   | 22.0   | 2.5                 | 1.2      | 1.5          | -           | 2.5         | 77.6   |
| All above count.* | 10.7   | -8.3  | 34.6     | 1.3   | 123.9  | 24.0                | 4.9      | 0            | 1.1         | 27.8        |        |

Notes: 0 = < ±\$ 100,000. \* Differences possible due to rounding. Shadowed cells indicate net imports – ie, demand potentials.

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

Regional demand for specific vegetables is larger than that for fruits, since Greece is also a significant net importer together with all other countries except for Turkey and Macedonia (see last column of Table 6). On the individual commodity level, the biggest regional demand exists for potatoes (\$ 22.4m annually), lettuce (\$ 7.3m), garlic (\$ 4.2m) and dried beans (\$ 3.8m) for which regional consumption exceeds production. Taking into account that Turkey does not sell its entire surplus on the Balkans, there seems also limited demand for tomatoes, carrots and potentially onions.

**Table 6:** Net trade (exports-imports) of some vegetables in selected Balkan countries, \$ m, 1996-2000 annual averages

|                 | Potatoes | Cabbages | Tomatoes | Pepers | Carrots | Onions | Cucumbers | Garlic | Lettuce | Peas, green | Beans, green | Beans, dry | Total* |
|-----------------|----------|----------|----------|--------|---------|--------|-----------|--------|---------|-------------|--------------|------------|--------|
| Slovenia        | -3.5     | -1.1     | -7.4     | -2.0   | -1.2    | -2.8   | -0.8      | -1.4   | -5.3    | 0           | -0.2         | -2.0       | -27.7  |
| Croatia         | -3.9     | -0       | -4.4     | -1.4   | -1.2    | -2.0   | -0.5      | -0.8   | -1.4    | 0           | -0.3         | -1.4       | -17.3  |
| Bosnia-Herze.   | -2.3     | -        | -2.6     | -      | -       | -0.8   | -         | -      | -       | -           | -            | -2.1       | -7.8   |
| FR Yugoslav.    | -0.8     | -1.4     | -6.8     | -      | -0      | -1.3   | -4.2      | -0.2   | -0      | 0           | -0.2         | -3.2       | -18.2  |
| Macedonia       | -1.7     | 2.1      | 5.0      | 0.8    | 0       | 0      | 3.9       | 0      | -0      | 0.1         | 0            | 0          | 10.5   |
| Albania         | -2.3     | -0.1     | -1.6     | -0     | -0      | -0.4   | -0.4      | -0     | 0       | -0          | 0.6          | 0.3        | -4.1   |
| Greece          | -27.4    | -0.5     | -2.3     | 1.6    | 0       | -1.1   | 12.8      | -2.4   | -0.7    | -0          | -0.1         | -12.0      | -32.0  |
| Turkey          | 19.4     | 1.0      | 41.6     | 22.4   | 2.4     | 20.1   | 5.2       | 0.6    | 0.1     | 0           | 0.3          | 16.7       | 130.0  |
| All abov. cou.* | -22.4    | -0       | 21.6     | 21.4   | 0       | 11.8   | 16.0      | -4.2   | -7.3    | 0           | 0.1          | -3.8       |        |

Notes: 0 = < ±\$ 100,000. \* Differences possible due to rounding. Shadowed cells indicate net imports – ie, demand potentials.

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

One note of caution must be made when interpreting the above presented figures: although the data are quite structural, since they are averages for several years, demand can change

quickly. In general, national aggregated demand is a function of a population's available budget (or income), product own and substitute products cross-prices and population preferences (YOUNG and BURTON, 1997). Each of the explanatory variables can change and with higher incomes, changes in relative prices or in preferences, the above specified demand will change too. Thus, there may never be a fixed potential. In addition, the composition of supplier countries can change as well. Once new market entrants can deliver better quality, lower prices, better customer service, a more convenient packaging etc, market shares can erode quickly. Thus, not only the overall size of the economic "pie" can grow or shrink, but also the size of the individual pieces for each supplier country can change rapidly. It makes therefore good sense to compare the conditions with which individual countries offer similar products on export markets. Since consistent information on quality, service or packaging in particular for the selected countries is difficult to obtain only prices will be analysed.

### 3.2 Export prices

Export unit values have been calculated by dividing export value (usually fob – free on board) by export quantity. The so obtained figures give a kind of average export price, including production and marketing costs up to a border warehouse or a harbour. Therefore, these unit values may reflect competitive advantages in international markets. However, since these figures are averages they can only accurately be compared for homogenous products. For bundle items (aggregates) such as fresh fruit and vegetables nes, prepared, preserved, or frozen etc, a comparison may be less useful since the total value depends of the actual composition of the bundle. Also, since the purpose of this analysis is to compare main competitors, unit values of only those countries will be considered which are net exporters.

Nevertheless, for the overall fruit and vegetables aggregate (see Table 7) it appears that Macedonia is the lowest cost producer or at least that it exports the lowest priced f&v, ahead of Greece, Turkey and Yugoslavia<sup>3</sup>. Yet, for frozen vegetables, Macedonia is among the high-price suppliers of the listed countries. However, since these aggregates are not completely comparable focus should be given to the analysis of export prices of individual commodities.

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<sup>3</sup> FR Yugoslavia is a special case here since it appears as net exporter for all f&v as reported in Table 4, but is a net importer for all listed fruit and vegetables in Table 5 and Table 6. However, the country is also a large net exporter of prepared fruit nes (such as jams and nut flour etc) which causes that the overall balance turns out to be positive.

**Table 7: Export unit values (US cents per kg) of fruit and vegetables in selected Balkan countries, 1996-2000 annual averages**

|                             | Fruit & vegetab. | Fruit fresh nes | Fruit prep nes | Veg. prep or pres | Vegetables fresh nes | Vegetables frozen | Vegetables prep nes |
|-----------------------------|------------------|-----------------|----------------|-------------------|----------------------|-------------------|---------------------|
| Slovenia                    | 65.3             | 30.4            | 102.3          | 134.9             | 40.1                 | 73.5              | 170.1               |
| Croatia                     | 82.5             | 100.9           | 146.1          | 92.0              | 89.3                 | 102.8             | 159.6               |
| Bosnia-Herzegov.            | 111.4            | 40.7            | 93.7           | —                 | —                    | 129.3             | 54.0                |
| FR Yugoslavia               | 106.8            | 55.8            | 103.8          | 51.8              | 32.7                 | 85.0              | 78.5                |
| Macedonia                   | 45.2             | —               | 124.5          | 85.3              | 48.2                 | 121.5             | 143.5               |
| Albania                     | 45.1             | —               | 34.3           | 12.5              | 4.5                  | 129.3             | 13.2                |
| Greece                      | 68.8             | 65.5            | 66.8           | 186.2             | 126.1                | 165.0             | 132.7               |
| Turkey                      | 91.6             | 68.2            | 155.6          | 92.5              | 41.8                 | 63.7              | 135.7               |
| Average for above countries | 77.1             | 60.3            | 103.4          | 93.6              | 54.7                 | 108.8             | 110.9               |

Notes: Nes = not elsewhere specified, prep = prepared, pres = preserved. Shadowed cells indicate that net exports have existed during the last 5 years based on the results presented in the tables above.

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

As for fruits, the calculated export unit values reveal that, in general, Macedonia is most competitive in the international markets, at least for the items listed in Table 8. The next most competitive fruit supplier is Turkey, followed by Greece. However, there are also differences among different commodities. For example, for apples Slovenia is the lowest-cost producer, while Yugoslavia is most price competitive for pears, plums and raspberries.

**Table 8: Export unit values (US cents per kg) of some fruits in selected Balkan countries, 1996-2000 annual averages**

|                          | Apples | Pears | Cherries | Plums | Grapes | Peaches, nectarines | Apricots | Strawberries | Raspberries | Watermelons | Country average |
|--------------------------|--------|-------|----------|-------|--------|---------------------|----------|--------------|-------------|-------------|-----------------|
| Slovenia                 | 28.4   | 54.0  | 76.8     | 27.9  | 31.3   | 57.9                | 39.2     | 114.3        | 65.6        | 12.5        | 50.8            |
| Croatia                  | 22.4   | 91.4  | 75.5     | 118.5 | 89.9   | 154.0               | 100.0    | 294.1        | —           | 22.0        | 107.5           |
| Bosnia-Herze.            | 25.6   | 39.9  | —        | 32.1  | —      | —                   | —        | —            | —           | —           | 32.5            |
| FR Yugoslavia            | 21.0   | 35.1  | —        | 20.7  | 25.6   | 42.1                | 30.5     | 66.7         | 75.4        | 5.9         | 35.9            |
| Macedonia                | 32.5   | 33.9  | 72.9     | 20.0  | 46.7   | 24.6                | 60.6     | 147.6        | 87.8        | 12.4        | 53.9            |
| Albania                  | —      | 18.2  | —        | —     | 33.3   | —                   | —        | —            | —           | 21.0        | 24.2            |
| Greece                   | 32.1   | 43.0  | 166.2    | 64.9  | 115.5  | 47.0                | 93.8     | 179.3        | 331.7       | 19.6        | 109.3           |
| Turkey                   | 54.9   | 45.7  | 163.6    | 75.7  | 48.5   | 38.3                | 79.4     | 38.7         | 200.0       | 18.2        | 76.3            |
| Average for above count. | 31.0   | 45.1  | 111.0    | 51.4  | 55.8   | 60.7                | 67.3     | 140.1        | 152.1       | 16.0        |                 |

Note: Shadowed cells indicate that net exports have existed during the last 5 years based on the results presented in the tables above.

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

With regard to vegetables, the calculated export unit values show in general (see last column of Table 9) that Turkey and Macedonia as the major vegetables suppliers in the region are almost similarly cost-effective. However, while Macedonia is more competitive for cabbages, peppers, and cucumbers, Turkey produces cheaper tomatoes and dried beans, the latter compared to Albania.

**Table 9: Export unit values (US cents per kg) of some vegetables in selected Balkan countries, 1996-2000 annual averages**

|                           | Pota-toes | Cab-bages | To-matoes | Pep-pers | Car-rots | On-ions | Cu-cum-bers | Gar-lic | Let-tuce | Peas, gre-en | Be-ans, green | Be-ans, dry | Country aver-age |
|---------------------------|-----------|-----------|-----------|----------|----------|---------|-------------|---------|----------|--------------|---------------|-------------|------------------|
| Slovenia                  | 9.7       | 18.9      | 37.6      | 32.4     | 11.0     | 26.4    | 31.3        | 74.9    | 38.2     | 41.1         | 50.0          | 71.4        | 36.9             |
| Croatia                   | 21.6      | 53.3      | 65.3      | 44.8     | 103.1    | 71.3    | 49.1        | 172.5   | 78.5     | 41.6         | 107.9         | 153.6       | 80.2             |
| Bosnia-Herze.             | —         | —         | —         | —        | —        | —       | —           | —       | —        | —            | —             | —           | —                |
| FR Yugoslavia             | 20.0      | 14.5      | 27.6      | —        | 22.9     | 26.3    | 40.2        | 49.7    | 10.9     | —            | 76.6          | 96.7        | 38.5             |
| Macedonia                 | 21.3      | 13.1      | 54.0      | 42.0     | 25.3     | 18.3    | 39.3        | 45.9    | 11.1     | 159.7        | 64.6          | 75.3        | 47.5             |
| Albania                   | 18.2      | —         | 84.8      | —        | —        | 50.0    | —           | —       | 181.8    | 81.8         | 80.5          | 98.3        | 85.1             |
| Greece                    | 24.5      | 26.9      | 39.7      | 70.5     | 18.3     | 23.1    | 88.3        | 134.8   | 106.8    | 150.0        | 137.9         | 104.2       | 77.1             |
| Turkey                    | 18.2      | 28.7      | 34.3      | 72.7     | 18.3     | 15.0    | 52.0        | 52.7    | 62.3     | 83.2         | 83.4          | 72.3        | 49.4             |
| Average for above countr. | 19.1      | 25.9      | 49.1      | 52.5     | 33.2     | 32.9    | 50.0        | 88.4    | 70.0     | 92.9         | 85.8          | 96.0        |                  |

Note: Shadowed cells indicate that net exports have existed during the last 5 years based on the results presented in the tables above.

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

#### 4 CONCLUSIONS

The implications for Kosovo which arise from the above analysis are twofold: First, there are real demand potentials for some fruit and vegetables in the neighbouring Balkan region. With regard to vegetables, the biggest regional demand exists for potatoes, lettuce, garlic and dried beans and to a limited extent for tomatoes, carrots and potentially onions. Frozen vegetables are in short supply in Greece, Slovenia, Croatia and Albania. As for fruits, there is a lack of regionally produced pears and to a certain extent also of apples. Second, despite these potentials it must be stressed that these markets may only be entered when Kosovo's horticulture sector can sell in a competitive way – ie, it can deliver better quality, lower prices, better customer service, more convenient packaging etc than other countries. While prices may not be the only nor the most important criteria – the results presented above show clearly that at least in some cases significant price differences exist among net exporters of the same commodities – they certainly have a significant effect on export competitiveness. The following Table 10 summarises the obtained findings and lists the estimated demand potential for each horticultural commodity which was identified as being in short supply on the Balkans, the main suppliers, and the minimum and maximum export prices (export unit values) at which the commodities were sold on average during the last five years.

**Table 10: Export potentials and average export prices for selected fruit and vegetables on the Balkans**

|  | Potatoes | Lettuce | Garlic | Beans, dry      | Pears           |
|--|----------|---------|--------|-----------------|-----------------|
| Estimated regional annual demand (\$m)                           | 22.4     | 7.3     | 4.2    | 3.8             | 8.3             |
| Main regional suppliers (net exporters)                          | Turkey   | Turkey  | Turkey | Turkey; Albania | FR Yug.; Turkey |
| Minimum average export price (export unit value) US cents per kg | 18.2     | 62.3    | 52.7   | 72.3            | 35.1            |
| Maximum average export price (export unit value) US cents per kg | –        | –       | –      | 98.3            | 45.7            |

Source: Own calculations based on FAOSTAT data: [www.fao.org](http://www.fao.org).

As it becomes clear, Turkey is the most important competitor for all listed commodities except for pears for which Yugoslavia exports cheapest. Turkey may even be more price competitive on the Balkans than the above figures suggest since part of its exports end up in higher priced EU markets, thus driving average export unit values up.

A broader assessment of Kosovo's regional competitive advantage as a fruit & vegetable producer, however, must also include other factors. As it looks like, the country has neither significant climatic nor geologic advantages. Kosovo is geographically located in the north of Turkey, Greece and Macedonia, thus causing crops to ripen only later during the year. Also, in contrast to for example Albania or Croatia, Kosovo cannot benefit from Mediterranean climate which is more favourable for f&v production. Moreover, Kosovo's field sizes are small and fragmented and land reform is needed in order to reach 'critical' plot sizes which allow for large-scale production in order to benefit from economies of scale (KACI, 2002). However, Kosovo seems to have sufficient water supplies and irrigation systems (even if some of them were damaged during the war) which is certainly an asset with regard to horticultural production (KABASHI, 2002). Another 'natural' disadvantage is that Kosovo is a landlocked country, thus it is cut off from main (in particular maritime) trade routes. On the human capital side, Kosovo's population has to cope in a now 'free' market environment without, in general, having been trained to do so (GJERQIZI, 2002). A further problem is the lack of specialised institutions such as professional associations, market monitoring and analysis bodies, marketing organisations, extension and other advisory services etc which 'free' markets need in order to function effectively (WORLD BANK, 2002). In addition, Kosovo faces the same problems than the other now independent states of the former Yugoslavia: privatisation of formerly socially owned production assets and their urgently needed modernisation. However, it is widely acknowledged that Kosovo is probably still five years or so behind of its neighbours such as Macedonia or Croatia in the privatisation process while other competitors such as Greece and Turkey do not have, or to a much lesser extent, such problems. Finally, Kosovo farmers, at present, are not only unprotected against cheap horticultural imports by means of import tariffs or duties, they are also disadvantaged by the fact that agricultural inputs, which need to be imported into Kosovo due to a lack of locally produced supplies, are taxed (GFA/STOAS, DAFRD and FAO, 2002).

In conclusion, by taking all these facts together, it seems that, at present and also very likely in the medium-term future, Kosovo will be having a difficult time to either compete against horticultural imports from neighbouring countries or to export into these markets, although export potentials clearly exist as this study has shown.

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**ACKNOWLEDGEMENTS**

This paper is a substantially revised version of one part of an unpublished market study which was commissioned by Intercooperation, a Swiss development NGO, for its Swiss Project of Horticultural Promotion – Kosovo (SPHP-K).

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