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Illegal Trade in South East Europe

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About

Shortly after the end of the Kosovo war, the last of the Yugoslav dissolution wars, the Balkan Reconstruction Observatory was set up jointly by the Hellenic Observatory, the Centre for the Study of Global Governance, both institutes at the London School of Economics (LSE), and the Vienna Institute for International Economic Studies (wiiw). A brainstorming meeting on Reconstruction and Regional Co-operation in the Balkans was held in Vouliagmeni on 8-10 July 1999, covering the issues of security, democratisation, economic reconstruction and the role of civil society. It was attended by academics and policy makers from all the countries in the region, from a number of EU countries, from the European Commission, the USA and Russia. Based on ideas and discussions generated at this meeting, a policy paper on Balkan Reconstruction and European Integration was the product of a collaborative effort by the two LSE institutes and the wiiw. The paper was presented at a follow-up meeting on Reconstruction and Integration in Southeast Europe in Vienna on 12-13 November 1999, which focused on the economic aspects of the process of reconstruction in the Balkans. It is this policy paper that became the very first Working Paper of the wiiw Balkan Observatory Working Papers series. The Working Papers are published online at www.balkan-observatory.net, the internet portal of the wiiw Balkan Observatory. It is a portal for research and communication in relation to economic developments in Southeast Europe maintained by the wiiw since 1999. Since 2000 it also serves as a forum for the Global Development Network Southeast Europe (GDN-SEE) project, which is based on an initiative by The World Bank with financial support from the Austrian Ministry of Finance and the Oesterreichische Nationalbank. The purpose of the GDN-SEE project is the creation of research networks throughout Southeast Europe in order to enhance the economic research capacity in Southeast Europe, to build new research capacities by mobilising young researchers, to promote knowledge transfer into the region, to facilitate networking between researchers within the region, and to assist in securing knowledge transfer from researchers to policy makers. The wiiw Balkan Observatory Working Papers series is one way to achieve these objectives.

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Illegal Trade in South East Europe

Mario Holzner and Vladimir Gligorov (wiiw)

Abstract

Based on the theoretical foundations as described in Bhagwati (1974), illegal trade can be defined to consist of faked invoicing on the one hand and smuggling on the other hand. While in the first case at least one of the trading partner countries has recorded a trade flow either as an export or as an import, in the latter case no official customs data is available. Smuggling is bypassing legal trade channels altogether. Therefore it is difficult to estimate the full magnitude of illegal trade with the help of one single method. In this paper we rather tried to detect faked invoicing and smuggling in the Balkans separately. Therefore we first tried to measure illegal cross-border trade in South East Europe (SEE) in order to have at least some impressions about the magnitude of this phenomenon and second we analysed illegal trade from a more theoretical perspective and provided an overview of possible policy relevant aspects. The paper ends with some discussion on the impact of illegal trade on security and of some soft security instruments that could be used to address it.

Keywords: Illegal Trade, Faked Invoicing, Smuggling, South East Europe

JEL classification: F19, O17, P37

Contents

1. Introduction

Based on the theoretical foundations as described in Bhagwati (1974)[1], illegal trade can be defined to consist of faked invoicing on the one hand and smuggling on the other hand. While in the first case at least one of the trading partner countries has recorded a trade flow either as an export or as an import, in the latter case no official customs data is available. Smuggling is bypassing legal trade channels altogether. Therefore it is difficult to estimate the full magnitude of illegal trade with the help of one single method. Rather we shall try to detect faked invoicing and smuggling in the Balkans separately. Therefore we shall first try to measure illegal cross-border trade in South East Europe (SEE) in order to have at least some impressions about the magnitude of this phenomenon and second we shall analyse illegal trade from a more theoretical perspective and give an overview of possible policy relevant aspects. The paper ends with some discussion on the impact of illegal trade on security and of some soft security instruments that could be used to address it.

2. Measuring Illegal Trade in South East Europe

In this section of the paper we will try to provide a crude estimate of the magnitude of the illegal cross-border trade in the Balkans in recent years. In this respect we shall divide our analysis in two parts according to the definition of illegal trade by Bhagwati (1974). First we will analyse faked invoicing in South East Europe with the help of partner-country-data comparisons. This will be followed by an analysis of SEE smuggling in a case study on tobacco smuggling. The aim of this analysis is to go beyond the usual anecdotal evidence as described e.g. in Hajdinjak (2002) or local press articles as e.g. in Kavain (2003) and to present some quantitative estimates.

2.1. Measuring Faked Invoicing in South East Europe

The principal technique of detecting illegal trade – the partner-country-data comparison technique – has its roots in the work of Morgenstern (1950) on the accuracy of foreign trade statistics. The technique was further developed by Naya and Morgan (1969) and Bhagwati (1964), who linked the discrepancies of partner-country foreign trade data to the economic rationale of the underinvoicing of imports carrying high duties.

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[1]   This book is a compilation of pioneering articles in the theory and measurement of illegal trade.

However, discrepancies of partner-country foreign trade data can occur for many reasons. According to ITC (2003) these reasons can be grouped as follows. One reason for the differences in the export data of one country as compared to the import data of the other country is due to differences in the coverage and the time of recording. This includes differences in the practices of: including specific goods or not (e.g. returned goods, emergency aid, military goods); the classification of goods or services (e.g. software); statistical threshold values; confidentiality; simplification; time lag in compilation (e.g. due to the time lag between shipment and arrival); reference period; and finally illegal and unrecorded trade. The other reasons are differences in the application of: the trade system (general or special trade system); commodity classification; valuation (cif or fob, currency conversions); quantity measurement (gross or net, units); partner country (transit trade or re-export); and errors and estimations.

In general it can be assumed that import figures should be somewhat higher than export figures. Usually exports are valued fob (free on board) and imports cif (cost insurance and freight). On average it is observed that the difference of freight and insurance costs make about 10%. Under the (probably strong) assumption that all the other reasons for discrepancies between partner-country trade data do not follow a certain pattern but occur randomly and therefore should balance over the period of observation, and under the assumption that the difference of fob and cif values are on average 10%, the remaining discrepancies can be attributed to faked invoicing and thus illegal trade.

There can be different incentives for faking invoices. In countries with foreign exchange controls and a substantial black market for foreign currencies it can be profitable to underinvoice exports and overinvoice imports. There might be an incentive for capital flight. However, in the case of the SEE countries (and its main trade partner – the EU) major foreign exchange controls are not any more in practice and the black market for foreign currencies almost vanished. Here it could be assumed that the incentive works in the other way. Due to tariff and value added tax (VAT) collection as well as non tariff barrier (NTB) regulations at the borders there is an economic rationale for the underinvoicing of imports. There could also be an incentive for the overinvoicing of exports due to VAT refund and exports subsidies for certain products. Overinvoicing of exports might also be a way of money laundering. In this respect we shall analyse the trade data of the Balkan countries in comparison to the mirror trade data as provided by the trade partner countries.

For this task we shall use the trade data compiled by the International Trade Centre (ITC) which is the technical cooperation agency of the United Nations Conference on Trade and Development (UNCTAD) and the World Trade Organization (WTO). We will also apply the ITC methodology for the calculation of discrepancy measures as described in ITC (2003). Discrepancy measures are being calculated at the four-digit level of the Harmonised System (HS) for the 98 countries reporting their trade data to the United Nations Statistics

Division (UNSD) Commodity Trade Statistics Database (COMTRADE) in 2001. This includes data on imports and exports by partner country and by major product. Unfortunately Bosnia and Herzegovina, Bulgaria and Serbia and Montenegro are not included in this database. Thus the analysis has to restrict at this stage to Albania, Croatia, Macedonia and Romania. This is a relatively strong restriction to the analysis as especially Bosnia and Herzegovina as well as Serbia and Montenegro are important trading partners for Croatia and Macedonia respectively. For this reason we shall investigate in addition bilateral trade flows as provided directly by the customs offices of Croatia and Bosnia and Herzegovina subsequently.

In the following tables we will generally provide the data on exports fob (or imports cif) of the analysed country, the mirror estimate cif (or the corresponding fob estimate) of the partner countries as well as a discrepancy indicator for the respective trade flows by countries or products and the analogous discrepancy indicator for the respective partner country versus the world or the respective product in world trade. This can help to get a feeling whether the discrepancy is in line with the other data or specific for the analysed country. In accordance with ITC (2003) we calculate the discrepancy (total) measure relative to the total recorded trade flows. Thus, for exports the discrepancy indicator D_x is defined as:

$$D_x = 100*(M-T)/(T+M), \qquad (1)$$

where M is the mirror estimate and T is the reported trade flow of the home country. Consequently we have to change the sign for the import discrepancy indicator D_m, which is defined as:

$$D_m = 100*(T-M)/(M+T). \qquad (2)$$

The discrepancy measures for the world trade is calculated in the same way but on the world trade value for the respective country or product group under review.

In addition to this we calculated in each table an adjusted mirror estimate and an adjusted discrepancy indicator assuming the difference between fob and cif values to be 10% on average. This leads us to a new cif adjusted discrepancy indicator (calculated as defined in equation 1 and 2) and a lower bound estimate of illegal exports or imports due to the underinvoicing of imports (and/or overinvoicing of exports) when the sign is positive and overinvoicing of imports (and/or underinvoicing of exports) when the sign is negative. The (strong) assumption is that all the other possible causes of discrepancies occur randomly and balance over the period of observation.

6

Table 1

Albania: Faked Invoicing in 2001 Exports, by main countries of destination

	Export[1) fob USD mn	Mirror[1) estimate, cif USD mn	Discrepancy (total)[2) %	Partner country vs world %	Mirror estimate, fob[3) USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**294.4**	**355.5**	**9.4**	**.**	**323.2**	**4.7**	**-28.8**	**.**
ITALY	216.4	228.5	2.7	5.6	207.7	-2.0	8.7	6205 ,6403 ,7202 ,1604
MACEDONIA	6.3	1.2	-67.3	-18.6	1.1	-70.5	5.2	2716 ,3801 ,7311 ,8414
SWITZERLAND	4.5	0.3	-88.8	1.0	0.3	-88.6	4.2	4907 ,7113 ,1211
CROATIA	0.0	0.9	94.3	8.1	0.8	100.0	-0.8	1211 ,2610 ,2621 ,3921
SPAIN	0.3	1.4	66.8	3.2	1.3	61.8	-1.0	0910 ,3907 ,6204 ,6205
AUSTRIA	0.7	1.9	45.7	3.4	1.7	42.3	-1.0	3815 ,4907 ,6204 ,6205
NETHERLANDS	0.4	1.8	65.9	-12.1	1.6	60.7	-1.2	2401 ,3002 ,3901 ,8431
USA	2.0	7.6	58.0	5.5	6.9	55.1	-4.9	0712 ,2401 ,6403 ,8542
GREECE	38.6	57.4	19.6	-1.0	52.2	15.0	-13.6	6305 ,6104 ,6201 ,6111
FRANCE	2.0	17.5	79.5	0.0	15.9	77.7	-13.9	2530 ,8414 ,1211

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 2

Albania: Faked Invoicing in 2001 Exports, by main product groups

HS		Export[1) fob USD mn	Mirror[1) estimate, cif USD mn	Discrepancy (total)[2) %	Discrepancy (total), World %	Mirror estimate, fob[3) USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn
	Total	**294.4**	**355.5**	**9.4**	**4.6**	**323.2**	**4.7**	**-28.8**
6205	Men's shirts	17.4	7.8	-37.8	4.2	7.1	-42.1	10.3
6406	Part of footwear; removable in-soles, etc	78.2	76.9	-0.8	2.0	69.9	-5.6	8.3
6111	Babies' garments, knitted or crocheted	7.2	0.3	-91.1	11.6	0.3	-92.7	6.9
6112	Track suits, ski suits and swimwear	6.5	2.7	-41.8	9.8	2.5	-45.2	4.0
7113	Articles of jewellery & parts thereof	4.2	0.2	-91.4	-5.7	0.2	-91.7	4.0
6206	Women's blouses & shirts	10.4	7.4	-17.2	10.9	6.7	-21.4	3.7
1211	Medicinal plants	9.5	7.5	-11.8	10.1	6.8	-16.4	2.7
6109	T-shirts, singlets and other vests	5.2	9.7	30.0	1.4	8.8	25.8	-3.6
6403	Footwear, upper of leather	6.5	12.1	29.9	11.0	11.0	25.7	-4.5
6204	Women's suits, jackets,dresses skirts etc	4.1	10.7	45.1	6.3	9.7	40.7	-5.6

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 3

Albania: Faked Invoicing in 2001 Imports, by main countries of origin

	Import[1] Cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**1,269.6**	**1,160.0**	**4.5**	**.**	**1276.0**	**-0.3**	**6.4**	**.**
GREECE	343.0	346.3	-0.5	-0.7	380.9	-5.2	37.9	2523, 2402, 2710, 2711
ITALY	424.2	417.6	0.8	-4.3	459.4	-4.0	35.2	6203, 2523, 6406, 4104
SWEDEN	12.4	18.5	-19.8	8.6	20.4	-24.3	8.0	8529, 4407, 8525, 8504
NETHERLANDS	10.0	15.0	-20.2	2.2	16.5	-24.5	6.5	8529, 8701, 2402, 8703
CZECH REP	6.2	10.8	-27.6	-1.8	11.9	-31.4	5.7	2402, 8607, 3402, 4011
RUSSIAN FED.	17.2	8.9	32.0	9.7	9.8	27.5	-7.4	3901, 4801, 7207, 2710
CHINA	26.4	15.9	24.8	22.7	17.5	20.3	-8.9	0203, 5513, 6911, 6404
BELARUS	9.5	0.0	99.4	-60.3	0.0	100.0	-9.5	1107, 1701, 2402, 3004
GERMANY	77.7	58.1	14.4	0.3	63.9	9.7	-13.8	1701, 8703, 8517, 8704
UNTD.KINGDOM	47.2	21.9	36.6	-1.2	24.1	32.4	-23.1	2716, 8506, 2710, 8212

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 4

Albania: Faked Invoicing in 2001 Imports, by main product groups

HS		Import[1] cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn
	Total	**1,269.6**	**1,160.0**	**4.5**	**4.6**	**1276.0**	**-0.3**	**6.4**
8525	Television camera, transmissn app for radiotel.	17.8	32.8	-29.6	-1.1	36.1	-33.9	18.3
2710	Petroleum oils, not crude	60.0	60.5	-0.4	3.2	66.6	-5.2	6.6
1701	Cane or beet sugar and chemically pure sucrose	13.1	16.8	-12.1	8.1	18.5	-17.0	5.4
3004	Medicament mixtures (not 3002, 3005, 3006)	15.3	18.1	-8.4	1.0	19.9	-13.1	4.6
8504	Electric transformer,static converter	10.4	13.3	-12.6	10.7	14.6	-16.9	4.2
8517	Electric app f. line telephony,incl curr line system	57.9	49.3	8.0	6.9	54.2	3.3	-3.7
2523	Cement, portland, aluminous, slag, supersulfate	45.3	37.4	9.5	14.5	41.1	4.8	-4.2
8704	Trucks, motor vehicles for transport of goods	15.5	7.0	38.0	3.0	7.7	33.6	-7.8
8703	Cars (incl. station wagon)	35.0	11.6	50.3	1.4	12.8	46.6	-22.2
2716	Electrical energy	50.5	0.0	100.0	2.4	0.0	100.0	-50.5

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 5

Croatia: Faked Invoicing in 2001 Exports, by main countries of destination

	Export[1] Fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**3556.9**	**3127.1**	**-6.4**	**.**	**2842.8**	**-11.2**	**714.1**	**.**
ITALY	1105.2	783.2	-17.1	5.6	712.0	-21.6	393.2	8901, 2711, 2710, 4403
GERMANY	688.6	597.8	-7.1	-1.1	543.5	-11.8	145.1	8901, 9032, 6406, 6403
AUSTRIA	267.4	168.0	-22.8	3.4	152.7	-27.3	114.7	8532, 8529, 8541, 6403
SLOVENIA	425.8	403.3	-2.7	2.0	366.6	-7.5	59.2	2710, 3102, 8708, 4407
MALTA	55.6	0.3	-98.9	-21.3	0.3	-99.0	55.3	8901
GREECE	46.9	21.4	-37.3	0.0	19.5	-41.4	27.4	8901, 2401, 6806, 4805
SWITZERLAND	42.7	25.1	-26.0	1.0	22.8	-30.3	19.9	1001, 2401, 2716, 7318
RUSSIAN FED.	83.3	77.1	-3.9	-19.7	70.1	-8.6	13.2	8480, 2103, 8502, 3004
USA	119.6	145.2	9.7	5.5	132.0	4.9	-12.4	7308, 2523, 2710, 9403
EGYPT	12.7	35.5	47.3	-17.7	32.3	43.5	-19.6	7204, 7207, 2401, 4407

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 6

Croatia: Faked Invoicing in 2001 Exports, by main product groups

HS		Export[1] fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn
	Total	**3,556.9**	**3,127.1**	**-6.4**	**4.6**	**2842.8**	**-11.2**	**714.1**
8901	Cruise ship, cargo ship, barges	456.1	35.8	-85.5	-53.5	32.5	-86.7	423.6
2711	Petroleum gases	117.8	68.6	-26.4	-0.5	62.4	-30.8	55.4
0302	Fish, fresh, whole	37.3	9.0	-61.0	5.5	8.2	-64.0	29.1
8532	Electrical capacitors, fixed, variable or adj.	26.7	1.1	-91.9	11.5	1.0	-92.8	25.7
8541	Diodes/transistors&sim semiconductor dev.	27.3	2.9	-80.8	8.5	2.6	-82.4	24.7
9032	Automatic regulating or controlling instruments	35.4	19.7	-28.5	4.8	17.9	-32.8	17.5
6403	Footwear, upper of leather	101.5	94.3	-3.7	11.0	85.7	-8.4	15.8
8708	Parts & access of motor vehicles	37.8	27.2	-16.2	2.4	24.7	-20.9	13.1
3901	Polymers of ethylene, in primary forms	58.0	54.0	-3.6	4.4	49.1	-8.3	8.9
6110	Jerseys, pullovers, cardigans, etc	93.0	94.0	0.5	19.2	85.5	-4.2	7.5

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 7

Croatia: Faked Invoicing in 2001 Imports, by main countries of origin

	Import[1] Cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	8,292.10	7,049.80	8.1	.	7754.8	3.3	-537.3	
SLOVENIA	711.3	796.6	-5.7	-0.1	876.3	-10.4	165.0	3004 ,8516 ,9403 ,4818
ITALY	1,524.1	1,508.1	0.5	-4.3	1658.9	-4.2	134.8	8703 ,9403 ,6110 ,2901
AUSTRIA	630.7	666.6	-2.8	-2.8	733.3	-7.5	102.6	8517 ,6406
NETHERLANDS	163.1	208.4	-12.2	2.2	229.2	-16.9	66.1	8473 ,8471 ,2203 ,3004
POLAND	176.0	97.1	28.9	-1.7	106.8	24.5	-69.2	8901 ,8906 ,8703 ,9401
GERMANY	1,546.5	1,335.6	7.3	0.3	1469.2	2.6	-77.3	8703 ,8704 ,3004
UNTD. KINGDOM	225.7	117.3	31.6	-1.2	129.0	27.3	-96.7	2716 ,8429 ,8703 ,8471
JAPAN	144.0	7.9	89.6	6.8	8.7	88.6	-135.3	8517 ,8521 ,9009 ,8525
USA	296.9	97.5	50.6	8.0	107.3	46.9	-189.7	8408 ,2941 ,8703 ,8471
RUSSIAN FED.	653.4	378.5	26.6	9.7	416.4	22.2	-237.1	2709 ,2711

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 8

Croatia: Faked Invoicing in 2001 Imports, by main product groups

HS		Import[1] cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn
	Total	8,292.1	7,049.8	8.1	4.6	7754.8	3.3	-537.3
8517	Electric app f. line telephony,incl curr line system	82.0	114.9	-16.7	6.9	126.4	-21.3	44.4
6110	Jerseys, pullovers, cardigans, etc	57.3	82.6	-18.1	19.2	90.9	-22.7	33.6
9403	Other furniture and parts thereof	92.1	109.2	-8.5	2.6	120.1	-13.2	28.0
3004	Medicament mixtures (not 3002, 3005, 3006)	168.3	176.6	-2.4	1.0	194.3	-7.2	26.0
8415	Air conditioning machines, motor-driven elem.	61.0	25.7	40.7	1.8	28.3	36.7	-32.7
8471	Automatic data processing machines	170.9	110.9	21.3	5.6	122.0	16.7	-48.9
2716	Electrical energy	91.2	11.4	77.8	2.4	12.5	75.8	-78.7
2709	Crude petroleum oils	432.5	255.7	25.7	23.0	281.3	21.2	-151.2
8703	Cars (incl. station wagon)	627.8	426.2	19.1	1.4	468.8	14.5	-159.0
8901	Cruise ship, cargo ship, barges	201.6	2.1	98.0	-53.5	2.3	97.7	-199.3

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Illegal exports are calculated as the difference between the fob export data of the home country and the cif adjusted mirror estimate. Assuming the underinvoicing of imports to be the main factor of discrepancy we expect a positive sign. Similarly, illegal imports are calculated as the difference between the cif adjusted mirror estimates and the cif import data of the home country. Again, assuming the underinvoicing of imports to be the main factor of discrepancy we expect a positive sign. Each table shows the described data for the ten largest illegal trade flows.

However, looking at table 1 and 2 on faked invoicing in Albanian 2001 exports by main countries of destination and by main product groups respectively, we observe a negative number for total illegal exports due to underinvoicing of imports in the partner countries. This implies that the Albanian export data is showing lower values than the cif adjusted partner-countries' import data. Given the fact that most of Albania's trading partners are EU countries and that the EU has granted Albania in 2000 Autonomous Trade Concessions (ATCs), liberalising 95% of the exports to the EU, incentives for underinvoicing EU imports from Albania might be reduced and underinvoicing of Albanian exports might be a way of decreasing export generated income with respect to Albanian corporate income taxation. It is also important to note, that the cif adjusted discrepancy indicator is not very high and that a negative illegal exports figure might be as well due to sloppy Albanian customs registration. Moreover Albanian trade flows are in general relatively low which implies that only a few mistakes in customs registration might cause changes in discrepancy indicators.

Nevertheless, the remaining EU trade barriers against Albania are tariff quotas on imports of wine, baby beef and certain fishery products and some NTBs in the textile industry[2]. This seems to be important when analysing the structure of the top ten HS 4-digit product groups which display illegal exports. Most of them are textiles either under an EU double-checking licensing regime or/and a special EU rule of origin regime, which could explain faked invoicing of EU imports from Albania in these product groups. Some of the other product groups where illegal exports might have been detected include such sensitive products as for example jewellery and 'medicinal plants", which includes e.g. coca and poppy. These last two product groups seem to be related to trade with Switzerland, which is one of the important illegal export destinations for Albania.

Looking at Albanian import data and its partner countries' statistics (table 3 & 4) a cif adjusted discrepancy of almost 0% can be observed at the aggregate level. However, for certain countries of origin (notably Italy and Greece) and for certain product groups (TV cameras and petroleum oils) underinvoicing of imports leads to somewhat more substantial illegal imports. Interestingly enough, in the group of products where import overinvoicing can be assumed, electrical energy (2716) is the most important one accounting for more

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2   The information on sensitive EU textiles is taken from Croatian sources (http://eicc.biznet.hr/tekstil/upute.htm). The author assumes that the rules applied to Croatia are similar for other West Balkan countries too.

than USD 50 mn without being mentioned in any of the mirror accounts in the trade partner-countries. The biggest part of Albanian state subventions are realised in the energy sector which might explain an economic incentive for the overinvoicing of imports. Other important products in this group are cars (USD -22 mn) and trucks (USD -8 mn).

While illegal trade due to faked invoicing of imports seems to be pretty outbalanced in the case of Albania, Croatia appears to be strongly involved in illegal exports (see tables 5 & 6) with an estimated volume of more than USD 700 mn. Main countries of destination being Italy, Germany and Austria. By far the most important product group in this respect is 8901: Ships for the transport of persons and goods. About 90% of the value of this export item 'disappears" in the partner countries' import data. However, as can be seen from the world wide discrepancy in this product group (about 50%), this is a relatively common feature. In this case overinvoicing of exports might be an explanation too. Ship building in Croatia is heavily subsidised. Other important illegal exports due to an assumed underinvoicing of imports in the partner countries can be detected in the product groups 2711 Petroleum gases (USD 55 mn) and 0302 Fresh fish (USD 30 mn). The first group is typically excised and the second underlies in many countries an import quota regulation (this is also the case for the remaining EU trade barriers in the ATCs for the West Balkan countries).

Turning to faked invoicing in Croatia's 2001 imports (in tables 7 & 8) reveals a relatively low cif adjusted discrepancy figure for the aggregate imports. Still there seems to be a considerable amount of underinvoiced imports from some of the EU-15 countries (especially Italy and Austria) and Slovenia with which Croatia had a Free Trade Agreement (FTA) at that time. Most important product groups with the highest illegal imports due to underinvoicing were telephone sets (USD 44 mn), Jerseys and pullovers (USD 34 mn) and Other furniture (e.g. for offices and kitchen - USD 28 mn). While in general Croatian tariffs are relatively low, the last two product groups were protected by above average tariffs. Telephone sets were not protected by tariffs at all. Even more puzzling is the fact that there is a substantial amount of overinvoicing of imports (or underinvoicing of exports from the side of the partner-countries) in the following product groups: 8901 Ships (USD 200 mn), 8703 Cars (USD 160 mn), 2709 Crude petroleum oils (USD 150 mn), 2716 Electrical energy (USD 80 mn), 8471 Automatic data processing machines (USD 50 mn), 8415 Air conditioning machines (USD 30 mn), 2711 Petroleum gases (USD 20 mn). It would be interesting to know who were the actual importers (or partner-country exporters) of these goods (e.g. private or public, etc.) in order to understand better the economic rationale behind that. As the Russian Federation shows the largest ('negative') illegal import flow in 2001, which is mainly related to crude petroleum oils it might also be that there is an economic incentive for Russian exporters to underinvoice because of still existing foreign exchange control measures and capital flight.

Table 9

Macedonia: Faked Invoicing in 2001 Exports, by main countries of destination

	Export[1] Fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**836.1**	**775.2**	**-3.8**	**.**	**704.7**	**-8.5**	**131.4**	**.**
CROATIA	58.2	0.0	-100.0	8.1	0.0	-100.0	58.2	2204 ,3004 ,7208 ,7306
SWITZERLAND	40.4	10.1	-60.1	1.0	9.2	-63.0	31.2	2603 ,2710 ,7103 ,7208
GREECE	100.7	76.7	-13.5	-1.0	69.7	-18.2	31.0	6304 ,6302 ,6206 ,2401
GERMANY	237.1	248.5	2.3	-1.1	225.9	-2.4	11.2	6109 ,8544 ,7208 ,2204
BELGIUM	7.3	0.8	-79.5	8.2	0.7	-81.9	6.6	2401 ,2620 ,3105 ,6204
USA	99.5	103.0	1.7	5.5	93.6	-3.0	5.9	6403 ,6405 ,6201 ,6203
PANAMA	5.1	0.0	-100.0	-66.9	0.0	-100.0	5.1	2607 ,2608 ,7801 ,7901
ALBANIA	9.9	15.0	20.4	4.5	13.6	15.9	-3.7	3901 ,2207 ,8537 ,0808
ITALY	88.4	103.0	7.6	5.6	93.6	2.9	-5.2	6405 ,4407 ,7209 ,6403
EGYPT	1.2	10.4	79.0	-17.7	9.5	77.5	-8.3	7210 ,2401 ,4407 ,8708

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.

Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 10

Macedonia: Faked Invoicing in 2001 Exports, by main product groups

HS		Export[1] fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn
	Total	**836.1**	**775.2**	**-3.8**	**4.6**	**704.7**	**-8.5**	**131.4**
7208	Flat-rolld products of iron/non-al/s wdth>/=6cm, hr	82.3	56.0	-19.0	4.6	50.9	-23.6	31.4
7901	Unwrought zinc	49.3	30.6	-23.3	7.5	27.8	-27.9	21.5
7210	Flat-rolled prod of iron or non-al/s wd>/=6cm, cr	28.5	16.1	-27.7	4.6	14.6	-32.1	13.9
6405	Footwear, nes	14.9	2.3	-73.1	-4.1	2.1	-75.4	12.8
6203	Men's suits, jackets, trousers etc & shorts	41.7	32.4	-12.5	0.1	29.5	-17.2	12.2
6206	Women's blouses & shirts	59.6	55.0	-4.0	10.9	50.0	-8.8	9.6
8544	Insulated wire/cable	22.5	14.9	-20.3	6.2	13.5	-24.8	9.0
6205	Men's shirts	64.5	63.9	-0.4	4.2	58.1	-5.2	6.4
3004	Medicament mixtures (not 3002, 3005, 3006)	10.8	5.4	-33.7	1.0	4.9	-37.5	5.9
6403	Footwear, upper of leather	13.4	28.8	36.5	11.0	26.2	32.3	-12.8

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.

Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 11

Macedonia: Faked Invoicing in 2001 Imports, by main countries of origin

	Import[1] Cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**994.60**	**1,448.10**	**-18.6**	**.**	**1592.9**	**-23.1**	**598.3**	**.**
GREECE	141.2	407.5	-48.5	-0.7	448.3	-52.1	307.1	2709, 2710, 2309
GERMANY	98.5	217.8	-37.7	0.3	239.6	-41.7	141.1	7408, 5208, 5516, 5407
ITALY	77.7	154.7	-33.1	-4.3	170.2	-37.3	92.5	8802, 6406, 4104, 3923
TURKEY	28.7	89.4	-51.3	3.0	98.3	-54.8	69.6	6002, 6305, 4818, 1704
NETHERLANDS	16.5	52.3	-52.2	2.2	57.5	-55.4	41.0	5208, 5514, 6002, 8702
FRANCE	28.9	53.3	-29.6	0.4	58.6	-34.0	29.7	8471, 2106, 8704, 8517
SLOVENIA	116.4	130.5	-5.7	-0.1	143.6	-10.4	27.2	4418, 9403, 8517, 3004
HUNGARY	15.3	36.0	-40.2	2.5	39.6	-44.3	24.3	0401, 8473, 8542, 0406
CROATIA	46.0	0.0	100.0	-6.4	0.0	100.0	-46.0	1602, 1604, 1806, 1905
RUSSIAN FED.	137.1	29.9	64.2	9.7	32.9	61.3	-104.2	2709, 7207, 7208, 8703

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 12

Macedonia: Faked Invoicing in 2001 Imports, by main product groups

		Import[1] cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn
HS	**Total**	**994.6**	**1,448.1**	**-18.6**	**4.6**	**1592.9**	**-23.1**	**598.3**
2710	Petroleum oils, not crude	58.1	85.4	-19.0	3.2	93.9	-23.6	35.8
8703	Cars (incl. station wagon)	29.3	45.9	-22.1	1.4	50.5	-26.6	21.2
8517	Electric app for line telephony,incl curr line system	8.5	18.4	-36.7	6.9	20.2	-40.8	11.7
9403	Other furniture and parts thereof	5.5	11.3	-34.5	2.6	12.4	-38.7	6.9
1701	Cane or beet sugar and chemically pure sucrose	11.9	14.9	-11.2	8.1	16.4	-15.9	4.5
0207	Meat & edible offal of poultry meat	19.6	20.7	-2.9	-3.2	22.8	-7.5	3.2
2713	Petroleum coke, petroleum bitumen & other res.	6.5	3.2	33.7	12.5	3.5	29.7	-3.0
8479	Machines&mech appl having indiv functions, nes	8.1	4.3	30.9	-0.3	4.7	26.3	-3.4
1005	Maize (corn)	8.4	3.6	40.4	6.6	4.0	35.9	-4.4
2709	Crude petroleum oils	118.1	92.4	12.2	23.0	101.6	7.5	-16.5

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 13

Romania: Faked Invoicing in 2001 Exports, by main countries of destination

	Export[1] Fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**10230.1**	**11241.2**	**4.7**	**.**	**10219.3**	**-0.1**	**10.8**	**.**
ITALY	2849.9	3006.8	2.7	5.6	2733.5	-2.1	116.4	6110, 7601, 6201, 6203
NETHERLANDS	384.2	328.6	-7.8	-12.1	298.7	-12.5	85.5	6405, 6402, 8517, 2710
HUNGARY	371.1	347.5	-3.3	7.1	315.9	-8.0	55.2	6110, 6108, 8473, 6206
MALTA	42.0	1.6	-92.5	-21.3	1.5	-93.3	40.5	2710, 8901, 7208
AUSTRIA	341.4	337.5	-0.6	3.4	306.8	-5.3	34.6	8708, 6204, 9401, 6203
REP.MOLDOVA	110.9	93.0	-8.8	-16.1	84.5	-13.5	26.4	7204, 7010, 8517, 4808
UTD.KINGDOM	566.1	654.4	7.2	-0.3	594.9	2.5	-28.8	8542, 6403, 6201, 8544
BELGIUM	192.6	278.6	18.3	8.2	253.3	13.6	-60.7	7208, 2710, 6204, 6110
GERMANY	1779.1	2056.3	7.2	-1.1	1869.4	2.5	-90.3	6202, 8708, 6110, 6205
USA	355.7	547.3	21.2	5.5	497.5	16.6	-141.8	8517, 6108, 8525, 6403

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 14

Romania: Faked Invoicing in 2001 Exports, by main product groups

HS		Export[1] fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn
	Total	**10,230.1**	**11,241.2**	**4.7**	**4.6**	**10219.3**	**-0.1**	**10.8**
8901	Cruise ship, cargo ship, barges	182.4	59.7	-50.7	-53.5	54.3	-54.1	128.1
6405	Footwear, nes	90.3	8.8	-82.2	-4.1	8.0	-83.7	82.3
2710	Petroleum oils, not crude	372.8	325.4	-6.8	3.2	295.8	-11.5	77.0
9403	Other furniture and parts thereof	397.0	359.6	-4.9	2.6	326.9	-9.7	70.1
8708	Parts & access of motor vehicles	137.9	85.9	-23.2	2.4	78.1	-27.7	59.8
6204	Women's suits, jackets,dresses skirts etc&shorts	739.8	882.4	8.8	6.3	802.2	4.0	-62.4
6202	Women's overcoats, wind-jackets etc o/t 62.04	84.5	166.4	32.6	13.5	151.3	28.3	-66.8
7601	Unwrought alumimum	109.7	194.2	27.8	3.6	176.5	23.4	-66.8
6403	Footwear, upper of leather	476.3	609.5	12.3	11.0	554.1	7.5	-77.8
6110	Jerseys, pullovers, cardigans, etc	215.8	373.2	26.7	19.2	339.3	22.2	-123.5

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 15

Romania: Faked Invoicing in 2001 Imports, by main countries of origin

	Import[1] Cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Partner country vs world %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn	Product groups with highest discrepancies HS 4-digit code
TOTAL	**13,893.7**	**12,968.2**	**3.4**	**.**	**14265.0**	**-1.3**	**371.3**	
GERMANY	2,363.6	2,719.3	-7.0	0.3	2991.2	-11.7	627.6	8544, 8703, 8704, 8701
HUNGARY	598.9	749.4	-11.2	2.5	824.3	-15.8	225.4	1001, 3923, 0203, 0103
ITALY	3,107.1	2,987.7	2.0	-4.3	3286.5	-2.8	179.4	6217, 6406, 2710, 5407
AUSTRIA	440.3	517.7	-8.1	-2.8	569.5	-12.8	129.2	4104, 1701, 3004, 8547
BELGIUM	255.6	316.2	-10.6	-14.4	347.8	-15.3	92.2	8479, 8703, 3004, 8701
NETHERLANDS	321.4	367.6	-6.7	2.2	404.4	-11.4	83.0	8703, 8471, 8473, 3004
AUSTRALIA	85.7	22.3	58.7	14.6	24.5	55.5	-61.2	2606, 3920, 4907, 2701
USA	494.0	352.5	16.7	8.0	387.8	12.0	-106.3	2402, 8802, 8471, 8525
JAPAN	153.1	10.0	87.7	6.8	11.0	86.6	-142.1	5516, 8452, 8473, 8532
RUSSIAN FED.	1,183.4	748.5	22.5	9.7	823.4	17.9	-360.1	2709, 2701, 7207, 2710

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 16

Romania: Faked Invoicing in 2001 Imports, by main product groups

HS		Import[1] cif USD mn	Mirror[1] estimate, fob USD mn	Discrepancy (total)[2] %	Discrepancy (total), World %	Mirror estimate, cif[3] USD mn	Discrepancy (cif adj.) %	Illegal Imports USD mn
	Total	**13,893.7**	**12,968.2**	**3.4**	**4.6**	**14265.0**	**-1.3**	**371.3**
8703	Cars (incl. station wagon)	220.9	435.9	-32.7	1.4	479.5	-36.9	258.6
6406	Part of footwear;romovable in-soles,etc	205.9	353.2	-26.4	2.0	388.5	-30.7	182.6
6217	Clothing accessories nes; o/t of hd 62.12	123.8	239.3	-31.8	4.5	263.2	-36.0	139.4
8544	Insulated wire/cable	176.0	259.0	-19.1	6.2	284.9	-23.6	108.9
8517	Electric app for line telephony,incl curr line system	218.5	267.6	-10.1	6.9	294.4	-14.8	75.9
8704	Trucks, motor vehicles for the transport of goods	89.2	136.2	-20.9	3.0	149.8	-25.4	60.6
9018	Electro-medical apparatus	96.7	131.0	-15.1	0.3	144.1	-19.7	47.4
4104	Leather of bovine/equine animal, o/t 4108/4109	412.0	326.8	11.5	4.2	359.5	6.8	-52.5
2701	Coal; briquettes, ovoids & similar solid fuels	165.7	66.9	42.5	10.9	73.6	38.5	-92.1
2709	Crude petroleum oils	554.5	238.0	39.9	23.0	261.8	35.9	-292.7

Source: Own calculations, ITC, based on COMTRADE data of the UNSD.
Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(T-M)/(M+T), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

In the case of Macedonian illegal trade flows it seems that the underinvoicing of imports (or the overinvoicing of exports) is the main type of faking invoices in both directions. Aggregate illegal exports due to underinvoicing of imports in the partner-countries (or the overinvoicing of exports in Macedonia) stood 2001 at about USD 130 mn. Main countries of destination (see table 9) were Croatia (USD 60 mn), Switzerland and Greece (with both about USD 30 mn). Major product groups for illegal trade (see table 10) were iron and zinc products (7208, 7901, 7210). The metal industry is one of the manufacturing branches where Macedonia is specialised in. An EU double-checking license regime has been established *inter alia* for Macedonian steel products 7208 and 7210. Several of the other important product groups are textile products. For possible explanations for this see the section on Albanian exports above.

Underinvoicing of imports is especially strong in the case of Macedonian 2001 imports as compared with the mirror estimates. The cif adjusted discrepancy indicator is high, resulting in some USD 600 mn of illegal imports. Most important countries of origin (see table 11) were Greece (USD 300 mn), Germany (USD 140 mn) and Italy (USD 90 mn). Major product groups (see table 12) were 2710 Petroleum oils, not crude (USD 36 mn), 8703 Cars (USD 21 mn) and 8517 Telephone sets (USD 12 mn). Though Macedonia has FTAs with almost all the countries in the region, tariff rates for imports from the EU are still relatively high (7.3% on average)[3]. Most of the product groups presented in table 12 carry even higher tariff rates, far above 10% for imports from the EU. Thus, in this case it seems to be reasonable to assume tariff avoidance as a major incentive for the underinvoicing of imports. Similar to the Croatian case, the major 'negative' illegal import flow (due to overinvoicing of imports and/or underinvoicing of exports) is in crude petroleum oils from Russia.

In Romania export discrepancies are not worthwhile mentioning on the aggregate level. Nevertheless there seems to be some underinvoicing of imports in Romanian trade-partner-countries especially in the case of exports to Italy, the Netherlands and Romania's neighbour Hungary (see table 13). Important product groups in illegal exports (see table 14) are as in the case of Croatia 2710 Ships for transport of persons and goods (USD 128 mn), 6405 Footwear (USD 6405 mn) and 2710 Petroleum oils, not crude (USD 77 mn). Interestingly, the major item where either underinvoicing of Romanian exports or overinvoicing of the partner-countries' imports has to be assumed is the product group 6110 Jerseys and pullovers with more than USD 120 mn of difference.

On the import side the aggregate picture is similar to the export side with relatively outbalanced but slightly positive illegal trade flows. Here the biggest illegal imports due to assumed underinvoicing stem from (see table 15) Germany (USD 630 mn), Hungary (USD 230 mn) and Italy (USD 180 mn). The opposite case of underinvoicing of exports might be

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[3]   2002 tariff data.

again observed for the imports from the Russian Federation (USD 360 mn, mainly due to trade in various petroleum products). Table 16 presents the top ten product groups in illegal imports. The highest values (apart from crude petroleum oils: USD -290 mn) can be observed for 8703 Cars (USD 260 mn), 6406 Parts of footwear (USD 180 mn) and 6217 Clothing accessories (USD 140 mn). Romania is generally a highly tariff protected country. However under the Europe Agreement Romania was 2001 already phasing out tariffs on products originating within the EU.

Looking at the results so far and just comparing the total discrepancy figures of the SEE countries with the figures for the total discrepancy on the world level we can try to assess whether and to which extent illegal trade due to faked invoicing is different in the Balkans. The aggregate picture shows that both Romanian exports and imports are close to the 4.6% world discrepancy level. Similarly, Albanian total imports fit the world average. However, Albanian, Croatian and Macedonian exports as well as Croatian and Macedonian imports display discrepancy figures that are either more than double the size of the world average and/or of a different sign. This would support the widespread belief that the Balkans are a stronghold of illegal trade. When it comes to single SEE product groups, the following can be identified as being traded illegally above the world average: textiles & footwear, petroleum, cars & trucks, ships, sugar, medicine and electronics.

This mix of goods is also confirmed by every day's newspaper articles in local press on this topic. As for instance Kavain (2003) writes about faked invoicing of textiles and consumer electronics at Croatian border stations. Kavain describes a network of phantom companies and corrupt customs officers organising illegal trade. One example concerns a group of Croatian bogus companies which declared for years the import of cheap textiles from Bulgaria and Romania for which FTA's foresee a zero tariff rate. However, when the Croatian customs recently controlled the cargo they found luxury trade marks' polo shirts of Paul & Shark and Lacoste, not produced neither in Bulgaria nor Romania. The shirts were declared to be worth 0.14 Euro each. In the wake of the investigations for this case police found out about another case of illegal trade with consumer electronics (TV sets, mobile phones, etc.). In both cases a chief of the office for the fight against counterfeits was suspected to be involved. The consumer electronics were mostly bought from Irish and US off shore companies. These goods were formally imported by Croatian companies which either do not exist at all or just maintain a mailing address. Upon import the goods were immediately taken over by big retail companies. Police found out that Slovenian customs received upon the exit from Slovenia the correct invoices indicating the true Croatian importers. However, upon entering Croatia the falsified invoices were presented which indicated the invented firms as the importer. This is just as to provide some insights into the concrete practices of faked invoicing in the Balkans. While in the first case an underinvoicing of imports occurs and could be also detected in our calculations, the second

case would not result in any discrepancy between domestic and partner country statistics, rather the Croatian state would be cheated out of customs revenue.

As it was already mentioned above, the analysis so far had to restrict at to Albania, Croatia, Macedonia and Romania because Bosnia and Herzegovina, Bulgaria and Serbia and Montenegro were not included in the COMTRADE database as provided by ITC. Given that especially Bosnia and Herzegovina as well as Serbia and Montenegro are important trading partners for Croatia and Macedonia respectively we shall investigate in addition to the analysis above the bilateral trade flows as provided directly by the customs offices of Croatia and Bosnia and Herzegovina as a supplementary case study.

Tables 17 and 18 show the main product groups where faked invoicing of the importing country can be assumed both in the exports from Croatia to Bosnia and Herzegovina and vice versa respectively. The data stems from the year 2002. The last column exhibits the average tariff protection of the importing country with regard to the single HS 4-digit product groups. In the first case illegal Croatian exports due to assumed underinvoicing at the Bosnian customs concentrate in the following product groups: 2710 Petroleum oils, not crude (USD 40 mn), 2402 Cigarettes (USD 13 mn) and 3004 Medicament mixtures (USD 5 mn). While the average tariff rate is not necessarily very high for those products (with the exception of cigarettes), e.g. excise taxes for fuels and tobacco and licensing regulations for medicaments could explain the incentive to underinvoice. The aggregate cif adjusted discrepancy figure is fairly balanced. The most blatant discrepancies where either Croatian underinvoicing or Bosnian overinvoicing has to be assumed are 1701 Sugar (USD 15 mn), 7207 Semi-finished products of iron or non-alloy steel (USD 10 mn) and interestingly 0803 Bananas (USD 9 mn). In the case of such goods as Bananas which are definitely not produced in Croatia it can be assumed that the discrepancy can be attributed to the fact that Croatian ports were used for the transit and Bosnian customs did not register the true country of origin.

When looking at the opposite trade flow an even lower relevance of underinvoicing by the importing side can be observed. There are some illegal Bosnian exports in the product groups 4407 Wood sawn (USD 8 mn), due to underinvoicing of the importer and there is an important illegal export flow due to overinvoicing of the importer (or the underinvoicing of the exporter) in aluminium (USD –24 mn). As Bosnian trade flows are in general very low we are probably observing in many cases only a few (if not in some cases only single) trade transactions per product group which obviously can result in a higher error probability. Moreover the incentives for the underinvoicing of imports is relatively low as Croatia is granting Bosnian exporters 0% tariff rates for all goods.

Table 17

Croatia: Faked Invoicing in 2002 Exports to Bosnia and Herzegovina, by main product groups

HS		Export[1] fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn	Average tariff rate %
	Total	**704.4**	**783.6**	**5.3**	**712.4**	**0.6**	**-7.9**	**3.7**
2710	Petroleum oils, not crude	154.5	126.0	-10.2	114.5	-14.9	40.0	2.4
2402	Cigars, cheroots, cigarillos & cigarettes	58.0	49.2	-8.2	44.7	-13.0	13.3	9.0
3004	Medicament mixtures (not 3002, 3005, 3006)	15.1	10.7	-17.1	9.7	-21.7	5.4	1.4
6905	Roofing tiles, chimney -pots & oth.ceramic.constr.g.	11.4	9.8	-7.5	8.9	-12.3	2.5	3.0
8471	Automatic data processing machines	9.4	13.1	16.6	11.9	11.9	-2.5	3.0
8525	Television camera, transmissn app for radiotel.	0.9	4.2	63.1	3.8	60.2	-2.9	3.0
8703	Cars (incl. station wagon)	0.1	7.0	96.4	6.3	96.0	-6.2	6.3
0803	Bananas	0.0	9.7	99.9	8.8	99.9	-8.8	3.0
7207	Semi-finished products of iron or non-alloy steel	0.4	10.9	92.2	9.9	91.5	-9.5	2.7
1701	Cane or beet sugar and chemically pure sucrose	0.3	16.7	96.9	15.2	96.6	-14.9	6.0

Source: Own calculations, national customs offices.

Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

Table 18

Bosnia and Herzegovina: Faked Invoicing in 2002 Exports to Croatia, by main product groups

HS		Export[1] fob USD mn	Mirror[1] estimate, cif USD mn	Discrepancy (total)[2] %	Mirror estimate, fob[3] USD mn	Discrepancy (cif adj.) %	Illegal Exports USD mn	Average tariff rate %
	Total	**143.4**	**166.4**	**7.4**	**151.2**	**2.6**	**-7.8**	**0.0**
4407	Wood sawn/chipped lengthwise, sliced/peeled	26.6	20.7	-12.4	18.8	-17.1	7.8	0.0
8601	Rail locomotives powered by electricity	1.4	0.0	-100.0	0.0	-100.0	1.4	0.0
8429	Self-propelled bulldozers, angledozers, etc.	1.6	0.6	-48.3	0.5	-51.9	1.1	0.0
8425	Pulley tackle and hoists other than skip hoists	1.1	0.0	-94.7	0.0	-95.2	1.1	0.0
6405	Other footwear	1.0	0.1	-73.9	0.1	-75.9	0.8	0.0
6109	T-shirts, singlets and other vests, k/c	0.1	1.1	88.8	1.0	87.8	-0.9	0.0
7308	Structures and parts of structures (o/t 9406)	2.9	4.2	19.0	3.9	14.4	-1.0	0.0
6403	Footwear, upper of leather	0.3	1.5	64.9	1.4	62.1	-1.1	0.0
9401	Seat (o/t dentists' & barbers' chairs, etc), &part	4.8	7.0	18.6	6.4	14.0	-1.6	0.0
7601	Unwrought aluminium	10.6	37.9	56.3	34.4	52.9	-23.8	0.0

Source: Own calculations, national customs offices.

Notes: 1) Only include trade with reporting countries; 2) Defined as 100*(M-T)/(T+M), T: reported trade, M: Mirror estimate; 3) Assumed freight and insurance difference of 10%.

In order to conclude this section of the paper we shall try to give a crude estimate of the overall impact of faked invoicing in the Balkans. Therefore we use the data on exports and imports by countries as provided above for Albania, Croatia, Macedonia and Romania. In a first step we calculated shares of illegal trade volumes due to over- and underinvoicing of exports and imports respectively country by country by summing up positive and negative entries of the 35 most important trade destinations. We could have done the same by products, however the implicit assumption is that a partner country has a similar trade regime for most of the product groups (i.e. rather restrictive or liberal trade policy). In a second step we calculated weighted shares and applied it to total 2003 export and import data of all the seven SEE countries (thus including intraregional trade flows). The results are the following.

We estimate about 11% of SEE-7 exports (or USD 3.8 bn) to be related to the underinvoicing from the side of the partner countries (or overinvoicning of domestic exports). Radically speaking this would imply that either partner country statistics are too low or official domestic export figures are too high. At the same time we estimate some 4% (or USD 1.4 bn) to be related to the overinvoicing from the side of the partner country (or underinvoicing of domestic exports).

Similarly we have calculated the shares for SEE-7 imports. Here, we found a share of approximately 12% of SEE-7 imports (or USD 7.9 bn) to be related to domestic underinvoicing (or overinvoicing of partner country exports) and about 10% of SEE imports (or USD 6.5 bn) to be related to domestic overinvoicing (or underinvoicing of partner country exports). The radical consequences would be that either local import statistics are too low or partner country exports statistics are too high in the first case and *vice versa* in the second case. However, all these figures have to be treated with utmost caution as they are based on relatively strong assumptions. Ideally one would need data on each single trade flow by product and country to estimate 'correct' figures.

2.2. Measuring Smuggling in South East Europe

With the help of the partner-country-data technique it can be possible to detect a considerable part of the illegal trade due to faked invoicing. However, this method will not help to detect the magnitude of smuggling trade as smuggling bypasses the legal trade channels altogether. This is also the reason why it is much more difficult to make any quantitative statements about the size of smuggling and its overall economic importance.

Most methods have to restrict to single goods using good specific data. Pioneering articles in this field of research are the papers by Simkin (1970) and Richter (1970) on Indonesian smuggling trade in rubber using e.g. production and inventory data for estimating the 'true' export of rubber. Given the limitations of the methods for the estimation of smuggling in general we shall focus in this research on the smuggling trade in one good notoriously smuggled all across the Balkans – cigarettes.

There is a host of literature on tobacco smuggling. Merriman (2001) provides e.g. a toolkit to 'Understand, Measure, and Combat Tobacco Smuggling'. He suggests various methods how to detect tobacco smuggling (asking experts, observing smokers and their buying habits, monitoring tobacco trade, comparing tobacco sales against consumption via surveys, comparing tobacco sales against consumption via modelling and calculations).

Inspired by this we will develop in the following our own method to detect the volume of cigarette smuggling in South East Europe using quantity data of official production, exports and imports as well as information from national household surveys on the amount of cigarette consumption. We shall start with the following identity:

$$TCC = OCP + UCP - OCE - UCE + OCI + UCI, \quad (3)$$

where TCC is the Total (domestic) Consumption of Cigarettes, OCP and UCP are the Official and the Unofficial Cigarette Production respectively, OCE and UCE are the Official and the Unofficial Cigarette Exports and where finally OCI and UCI are the Official and the Unofficial Cigarette Imports respectively. Transforming this leads us to the following equation:

$$ITBC - UCP = OCP - OCE + OCI - TCC, \quad (4)$$

where ITBC is the Illegal Trade Balance of Cigarettes (due to smuggling) which is equal to the difference between UCE and UCI. Applying official data on production, exports and imports as well as household survey data on cigarette consumption[4] in real quantities (i.e. cigarette sticks – in order to rule out the problem of under- and/or over- invoicing) to the right hand side of equation 4 should give us a result for the term ITBC-UCP, which can be seen as a lower bound estimate of the cigarette smuggling trade balance. This estimate does not include transit smuggling. It is probably fair to assume Unofficial Cigarette Production (UCP) to be relatively low[5] given the fact that tobacco manufacturing in most

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[4]   Estimating TCC with the help of data from national household surveys has certainly several flaws. One of them is the fact that this does not capture cigarette consumption due to (partly) legal cross-border shopping and legal tourist shopping (and it is doubtful whether this is included in the OCE data). This could somewhat distort the TCC estimates for Bulgaria and Croatia, being important tourism countries. However, for the purpose of this research we shall disregard this.

[5]   Here the implicit assumption is that UCP is 0.

countries is performed by only a few mostly state owned producers. However, a high UCP would obviously decrease the cigarette smuggling trade balance estimate to some extent.

For our research we have been using the official production and trade data as provided by ACS, WHO, IUAC, (2003) in their 'Tobacco Control Country Profiles, Second Edition, 2003' in millions of cigarette sticks for the years 1995 and 2000 for each[6] of the Balkan countries (see table 19). In order to estimate the total consumption of cigarettes we had to rely on Bulgarian household survey data which is the only source in SEE which provides cigarette consumption data in quantities[7] for the period from 1992 to present.

According to this Bulgarians smoke 2.6 cigarettes per capita per day on average. This is actually a pretty stable figure over time, varying between 2.8 and 2.4 except for the economic crises year of 1997 when it was at only 1.6. Under the assumption that Bulgarian cigarette consumption patterns are representative for all the Balkan countries, we used the 2.6 cigarettes per capita per day in order to calculate the Total Consumption of Cigarettes (TCC) for all the SEE countries. This assumption is being strengthened by 2001 data for Croatia (2.8) and Macedonia (2.7) expressed in money values and transformed into quantities by using the retail price of the Most Popular Price Category (MPPC) of cigarettes as provided by ACS, WHO, IUAC, (2003). Using this data in equation 4 results in ITBC-UCP estimates for all the seven SEE countries for the years 1995 and 2000.

Except for Albania in both years and Bosnia and Herzegovina in 1995, all the Balkan countries are illegal net exporters of cigarettes due to smuggling. Albania has almost no cigarette production at all and Bosnia and Herzegovina had to suffer war in 1995. In four countries illegal net exports increased over time. Albania reduced its illegal imports as official cigarette imports were recorded in 2000. In Bosnia and Herzegovina official trade figures didn't change a lot but post-war official production went up dramatically resulting in a shift from a illegal net importing country in 1995 to a illegal net exporting country in 2000. In fact the Bosnian net importer position in the 1990s is also supported by anecdotal evidence as described in Hajdinjak (2002) on the case of the so called 'Capljina cigarettes'. Cigarettes produced in the Croatian tobacco factories of Rovinj and Zagreb were smuggled to the Herzegovinian border town of Capljina and subsequently sold all over Bosnia and Herzegovina. However, this business was closed down in 2000 after the investigation of the financial police. It is estimated that Bosnia and Herzegovina lost tens of millions USD because of unpaid sales and excise taxes on 'Capljina cigarettes'.

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[6] For Bulgaria and Romania the original data as provided by the National Statistical Office was used.

[7] Data provided in kg was transformed into cigarette sticks under the assumption that 1 cigarette sticks weighs 1 g.

Table 19

South East Europe: Cigarette Smuggling, 1995 & 2000

		Albania		Bosnia & Herz.		Bulgaria		Croatia		Macedonia		Romania		Serbia & Mont.	
		1995	2000	1995	2000	1995	2000	1995	2000	1995	2000	1995	2000	1995	2000
Total Consumption of Cigarettes (TCC)[1]	mn sticks	3083	3228	3473	3559	7485	7977	4431	4211	1866	1923	21524	21291	10009	7917
Official Cigarette Production (OCP)	mn sticks	685	62	1500	4670	74603	26698	12110	13692	9664	9181	23000	33000	12686	14451
Official Cigarette Exports (OCE)	mn sticks	.	5	.	.	60900	4000	1627	6117	1483	5675	78	71	.	100
Official Cigarette Imports (OCI)	mn sticks	.	2260	.	25	200	200	12	34	218	130	22335	3474	100	2199
Illegal Trade Balance of Cigarettes (ITBC) less Unofficial Cigarette Production (UCP)	mn sticks	-2398	-911	-1973	1136	6418	14921	6064	3398	6533	1713	23733	15112	2777	8633
ITBC-UCP in 2001 domestic net prices[2]	USD mn	-29.4	-11.2	-33.2	19.1	37.5	87.3	146.0	81.8	32.5	8.5	333.8	212.6	31.8	99.0

Source: Own calculations, National Statistical Offices, Tobacco Control Country Profiles 2nd Edition 2003.
Notes: 1) Calculated for Bulgaria under the assumption that 1 cigarette stick = 1g, using data from household surveys.
Due to non-availability of similar data for the other countries, average daily per capita consumption of cigarettes in Bulgaria 1992-2001 (2.6) was used in order to calculate TCC for the other countries. -
2) Using the 2001 retail price of the Most Popular Price Category (MPPC) less excise and sales taxes.

Table 20

Bulgaria: Cigarette Smuggling, 1992-2001

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Consumption of Cigarettes (TCC)[1]	mn sticks	8473	8654	8387	7485	7249	4974	7384	8365	7977	7626
Official Cigarette Production (OCP)	mn sticks	48558	32098	53664	74603	57333	30212	33181	25715	26698	26659
Official Cigarette Exports (OCE)	mn sticks	38700	23100	43100	60900	40100	25700	10500	4000	4000	2400
Official Cigarette Imports (OCI)	mn sticks	8300	9200	1700	200	300	200	100	100	200	217
Illegal Trade Balance of Cigarettes (ITBC) less Unofficial Cigarette Production (UCP)	mn sticks	9685	9544	3877	6418	10284	-262	15397	13450	14921	16850
ITBC-UCP in 2001 domestic net prices[2]	USD mn	56.7	55.8	22.7	37.5	60.2	-1.5	90.1	78.7	87.3	98.6

Source: Own calculations, National Statistical Institute of Bulgaria, Tobacco Control Country Profiles 2nd Edition 2003.
Notes: 1) Calculated under the assumption that 1 cigarette stick = 1g, using data from household surveys. -
2) Using the 2001 retail price of the Most Popular Price Category (MPPC) less excise and sales taxes.

In the period 1995-2000 Bulgaria more than doubled its illegal net export position. Both official production as well as official cigarette exports fell radically. However, official production fell by 64% while official exports even dropped by 93%. In Serbia and Montenegro illegal net export position even tripled though for other reasons. Here both official production and official imports increased over time. In Croatia, Macedonia and Romania the illegal trade balance of cigarettes deteriorated from 1995 to 2000. In the first two cases this was due to increased official cigarette exports. In the case of Romania the opposite holds true. Official imports dropped severely by 84%.

On the regional level the Balkans were in 2000 in total illegal net exporters of about 44 bn cigarette sticks due to smuggling. In the last row of table 19 an effort was done to transform the quantity data into money values which is not a trivial task. This was done for each country separately using the 2001 retail price of the MPPC cigarettes less excise and sales taxes. The resulting 2001 net domestic price differs quite substantially across the region (from USD cent 0.5 per cigarette stick in Macedonia to USD cent 2.4 per cigarette stick in Croatia). This is probably due to the differences in quality, taxation, exchange rate and purchasing power among the SEE countries. However adding up the sums for the single countries leads to a total SEE illegal net export position in cigarette smuggling of close to USD 500 mn[8] in 2000. Nevertheless, it should not be forgotten that the above calculations did not involve transit smuggling, which is most probably an even more important factor at least for some countries in the Balkans. The case of Montenegro is well known in this respect (see e.g. Ivanovic (1999) on 'Speedboats, Cigarettes, Mafia and Montenegrin Democracy'). Allegedly containers full of cigarettes were bought in the duty free zone of the Rotterdam harbour and smuggled via speedboats from Montenegro to the nearby Italian coast. In the 1990s, according to Italian sources Montenegro made up to 60% of its GDP from this 'transit business'.

As the Bulgarian Statistical Office's yearbook offers all the necessary data for calculating ITBC-UCP from 1992 to 2001 we did also the same task as above for the full time series of Bulgaria only (see table 20). What can be seen from the data is that Bulgaria as a traditional tobacco growing country was an illegal net exporter of cigarettes over the whole period with the exception of the economic crises year of 1997 when it was an illegal net importer of cigarettes. This was also the year when official production and official exports dropped to a much lower level. From there on official production somewhat stabilised below 30 bn sticks per year while official cigarettes exports continuously fell until 2001 to an all time low of only 2.4 bn sticks. Official imports almost vanished already back in 1995. This resulted also in an all time high of about 17 bn cigarette sticks illegal net exports due to smuggling in 2001. Transformed in 2001 domestic net prices this figure reached almost USD 100 mn.

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[8]   Please remember that this is probably a lower bound estimate due to some non-observed unofficial cigarette production.

2.3. Conclusions

The analysis of illegal trade flows is a tricky task and would require much more in detail information on the trade specifics of all the single goods involved (e.g. trade in ships). Under quite strong assumptions we have tried to make quantitative estimates of the magnitude of illegal trade in the Balkans. The results have shown that there are substantial illegal trade flows especially with those products and countries where tariff and non tariff barriers as well as high taxes are being applied. The effective reduction of the tariff burden through Ilegal trade will lead to reduced price distortions and therefore welfare gains. However, especially developing countries are often very much dependent on tariff revenues in order to finance important public goods necessary for economic prosperity.

3. Illegal Trade – Policy Issues

Taxes and tariffs are prices for government services that are imposed by law. Unlike prices for private goods and services, those have to be paid by whoever they apply to on pain of punishment. Assuming that government services are demanded, there is clearly a price that a person or a firm would be ready to pay to acquire them. That can be called the voluntary price for public goods. The price imposed through taxes or tariffs[9] can be called an involuntary price. There are two issues to consider. One is the relationship between these two prices and the other is the mechanism that leads to the one or the other being in fact paid. We will look into the second issue first and then come back to the first issue. Finally, we will look into some possible policy issues when these reasoning is applied to the illegal trade in the Balkans.

3.1. Taxes and Illegality

Since Wicksell introduced the idea[10], it is usual to look at voluntary as compared to actual taxes. There are two ways to do that. One is to find the level of optimal taxation on the assumption that a mechanism for their collection exists. In other words, one assumes that, for instance, security is a good in demand and that people would be ready to pay for it voluntarily. As in the case of the other goods, security would be supplied efficiently if

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[9]   Term tax will be used for all government imposed prices for its services, e.g., including tariffs. The term tariffs will be used when tariffs only are discussed.

[10]   In Wicksell (1896).

marginal costs equalled marginal revenues, i.e., the desired level of security. That level of supply exists under usual assumptions.

The other question is whether it can be reached. That is the question whether there is a mechanism, an institution, that reveals the preferences for public goods and thus sets the price at which the desired level of these goods is supplied. In principle, except in the case of a pure public good, which is more of an theoretical construct, that mechanism should be available. However, the costs of its use have to be considered too. This is the Coasian aspect of the problem[11]. Once transaction costs are taken into consideration, it may be the case that involuntary taxes are preferable to the voluntary ones.

Whose preference is that? This is an issue in preference aggregation. Assuming that they are aggregated democratically, then they say that majority prefers certain level of involuntary taxes to another one of voluntary taxes. Given that they are involuntary, there will be an incentive to avoid them, if that is possible. Thus, together with the decision of how much involuntary taxation there should be, a decision is taken as to how much tax avoidance there will be. This is the point made by Becker in his treatment of crime and punishment[12]. Deciding to criminalize certain behaviour and determining the level of taxes to sustain certain level of coercion means determining the level of crime that one is ready to live with.

Thus, once taxes are used it is accepted that there will exist a certain amount of informal activity. Under additional assumptions, the level of taxation should determine the level of informal activity. This would apply to criminal activity if prohibition is treated as high level of taxation.

3.2. The Level of Taxation

The voluntary level of taxation could have a regulatory function in the sense that it would be equal to the involuntary one under a mechanism which would perfectly aggregate preferences for public goods and would involve the least amount of coercion. Sometimes, this is associated with the idea of a perfectly moral community. In such a community, people would reveal their true preferences for public goods and the amount of legal coercion would be minimal, indeed it would be zero. In other words, moral duty would take the role of the legal coercion[13].

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[11]   In Coase (1937).

[12]   In Becker (1968).

[13]   For a treatment see Laffont (1975).

In practice, however, actual levels of taxation could be lower or higher than the optimal level of taxation, which is the one that would be achieved if the taxes were paid voluntarily. Thus, there are three cases to consider:

Case 1. Actual and optimal taxes are at the same level.
In this case, the level of tax evasion should be zero because this case is possible only if it is indeed the voluntary rate of taxation that is being implemented.

Case 2. Actual taxes are below voluntary taxes.
In this case, the level of tax evasion cannot be attributed to the fact that there is over-taxation, i.e., that government services are overpriced. Whatever tax evasion existed it would be attributable to the inefficiencies of the system of taxation and tax collection offices.

Case 3. Actual taxes are higher than optimal taxes.
This is probably the most important case. Certainly, in the case of prohibitive taxes, i.e., outlawed activities, optimal taxes are at most as high as the actual ones. In most other cases, it could be expected that the fact that taxes are levied involuntarily, they will tend to be higher because of the cost of tax evasion. Thus, the level of tax evasion would be determined by the profit to be made from tax evasion plus the incentive to avoid overpricing of government services.

The identification of these cases is useful in order to be able to say something about the policy alternatives. Obviously, the level of taxation is not necessarily the crucial fact. The really important thing to know is in what relation is the actual taxation compared to the optimal one.

3.3. Free and Other Trade

If public services could be purchased in the same way in which private goods and services are purchased, indirect taxation would not exist. As the mechanisms that would elicit optimal income taxation do not exist or are very difficult to implement, taxes are levied on what can be taxed. This applies particularly to trade both domestic and foreign. That is problematic from the point of view of the voluntary or free character of trade and also from the point of view of efficient allocation. It is not clear that individuals and firms would be ready to voluntarily pay sales taxes, excises or tariffs. As a consequence, in the case of these taxes it can be assumed that actual tax rates are always above the optimal ones. Thus, there will always exist incentives to evade taxes.

One way to deal with this problem is to introduce free trade wherever that is possible. This seems to be especially applicable to tariffs. In principle, tariffs are an instrument of protection rather than a fiscal instrument. This comes from the fact that those are levied on foreign trade and are thus not subject to the same type of consideration as other taxes. In a sense, all other taxes can be seen as considered together and as having effects on those who decide on taxes. In the case of tariffs, this is not the case. Two governments determine two different tariff rates with the aim of shifting the burden and the benefits asymmetrically. Therefore, the incentives to evade tariffs is even greater than in the case of other indirect taxes. Thus, it makes sense to argue for free trade across borders because it is very difficult to devise a scheme of optimal taxation in that case.

3.4. Positive and Negative Rewards

Given that optimal taxation is not really feasible, the issue is how to devise a system of taxation that would minimize the incentives to evasion. In general, positive and negative rewards could be used. In general equilibrium, those are substitutes. In a sense, Coases theorem could be formulated in the following way:

Coases theorem on taxes: Taxes and subsidies are perfect substitutes.

In the theory of trade, this is applicable to the tariffs and export subsidies. If all other barriers to trade can be expressed in tax equivalents, then all of them are substitutes. That is in particular the case with prohibitions. If, however, transaction costs are considered, then this symmetry is broken. There is a real choice between different types of rewards. In most cases, both positive and negative rewards will be used with the appropriate mix being rather difficult to determine. Clearly, if punishments (negative rewards) are costly to implement, positive rewards should be used more.

In principle, that means that if fiscal efficiency is low, for whatever reason, then liberalization should be the preferred instrument. It may look otherwise when it comes to prohibitions. It may seem that if the tax system is not efficient, prohibitions should be used more often than lower taxes, simply because the prohibitions are easier to administer. Thus, on the border, it is often the case that non-tariff barriers are used because it is believed that those are easier to administer.

In practice, precisely the opposite may be the case. Free trade may be the best policy to implement, because it requires the least amount of administrative resources. The key problem may be that an international agreement may be deemed necessary in order to move from tariffs to free trade. In many cases, agreeing on free trade may be hard and

honouring the agreement may be even harder. Thus, in cross border trade as in domestic trade, it may be difficult to devise the proper mix of positive and negative rewards.

3.5. Policy Conclusions

In principle, actual taxes could be higher or lower than optimal taxes. Also, the costs of negative rewards could be higher or lower of those of positive rewards. Thus, in principle, there is no presumption that one level of taxation or one type of tax system is better than another.

However, in the case of tariffs, it is arguable that the optimal level is a zero tariff. Then, free trade is better than any other trade regime.

Also, it may seem that prohibition is the cheapest system to implement in some case, for instance in the case of dangerous or hazardous substances. In other words, it may be believed that smuggling is costlier than paying any level of tariffs.

However, in cases where fiscal discipline is low, prohibitions may be costlier to implement and thus smuggling may be cheaper than paying the tariff or other type of tax or non-tax barrier. Then, tariffs and even relatively modest tariffs maybe better than outright prohibitions.

In the case of the Balkan states, it may be assumed that optimal taxes are relatively low, given that there is little experience with taxation and the habit to free ride is well entrenched. Therefore, it is natural to assume that actual taxes are seen as being too high and thus there are high incentives to tax evade.

Also, corruption is widespread, so that prohibitive taxes only rise the level of bribes. That may have a modest influence on the level of illegal trade though it may decrease the level of trade in general. It may also affect the structure of trade, with that of smuggled goods being over-represented.

For both reasons, trade liberalization may be a better policy than any other. As for smuggling, prohibitions should probably be used less because of the low administrative capacity. In general, states should be encouraged to earn revenues from other sources rather than from tariffs.

4. Trade as an instrument of soft security

In the case of Southeast Europe, the best trade policy is that of trade liberalisation and in that perhaps the best regime is that of a customs union with the EU. If the experience of the candidate countries in Southeast Europe – Bulgaria, Romania and Turkey and now also Croatia – is considered, it becomes clear that keeping various levels and types of protection on the border creates more problems than solutions.

The same should be true for the countries in the Western Balkans too. In fact, most of the illegal trade is the consequence of restrictions to trade rather than of trade liberalisation. The single most important source of illegal trade was the regime of sanctions that was imposed on Serbia. Other embargoes and unilateral sanctions have had the same effect.

Thus, hardening the borders have had distinct effect of increasing the insecurity at least as far as that was connected with trade and investment.

4.1. Internal and invisible borders

Apart from the hardening of the official borders, other borders have had also quiet and effect on the development of trade and other business activities in Southeast Europe. Here, internal borders can be distinguished from invisible borders.

Internal borders exist in case where local communities or local governments act as states. This has been the case in Bosnia and Herzegovina, but can be found in other countries in the Western Balkans too. In the case of Bosnia and Herzegovina, this was the consequence of the interference from abroad. Parts of that country functioned as if they were attached to a neighbouring country. That created an internal border and a barrier to trade, though not always a tariff one. Thus, for a while, Republika Srpska used the Yugoslav dinar rather than the convertible mark that has been the currency in most of the rest of Bosnia and Herzegovina (Croatian kuna has been used in the Croat parts of that country).

Internal border exists between Serbia and Montenegro too. As these two countries have different tariffs on a number of products, they have a border that separates them as customs areas. They also use different currencies, which is another type of an internal border and a non-tariff barrier to trade.

Other types of internal borders exist in other parts of the Balkans, of which Kosovo is the most important case. Apart from internal, there are invisible borders. To see what is meant by that it can be noticed that so-called ethnic trade plays a very significant role. Thus, trade

between Serbia and Republika Srpska is much higher than with the rest of Bosnia and Herzegovina and the opposite is true for Croatia. In other cases trade is higher or lower than one would expect depending on reasons which have nothing to do with official border or with identifiable barriers to trade. This barriers could be called invisible borders because they are territorial but are also cultural or political.

Both types of additional borders have significant consequences for the development of both legal and illegal trade.

4.2. Borders and criminality

The borders are of course the necessary condition for the existence of the cross-border illegal trade. The harder they are, the higher is the level of across the border criminality. Sanctions and other types of prohibitions are especially conducive to the growth of illegal activities. Indeed, in the case of Southeast Europe, those were the main source of the large criminal community that has grown up in this region. As there are not only official borders but also internal and informal ones, the ground is clearly fertile for illegal trade and the associated criminal activities. Those are the source of the bulk of the security problems that exist in the region and are not directly connected with "hard security".

Dealing with those types of criminality, a balance has to be struck between the strengthening of the official borders and comprehensive liberalisation. The latter could be termed soft security instrument. Instruments could include:

Trade liberalisation. As argued above, that is one measure that could do the most when it comes to scaling back illegal trade. Obviously, tax evasion would not disappear and all that is connected with it. But most of the phenomena that are identified with the illegal trade, such as fake invoicing and smuggling would be diminished significantly if they were not disappear completely.

Investment liberalisation. Cross-border investments would also diminish the need to trade and do business illegally.

Liberalisation of trade in services. That would have an added important consequence because it would imply liberalisation of migration. That would help not only in the lowering of the illegal trade but also in the elimination of the invisible barriers. They are often supported by general aversion to inward migration.

When it comes to internal and invisible borders, political aspects of soft-security could play a significant role. Increased regional cooperation would diminish the tendency to deal only

with one's own kind. That would also increase competition and diminish the stronghold that some informal and criminal groups have over whole governments in this region. This is what already civil society organisations are doing, but political moves would have a much more far-reaching impact.

4.3. Conclusion

Liberalisation and political cooperation are the instruments of soft security which could contribute significantly to the decrease of illegal trading and other activities. Those measures come under the heading of rewards rather than punishments. Of course, the increase of efficiency at the official borders and many other measures would be useful too. But the key cause of illegal trade and the attendant security problems come from the proliferation of borders and tariff and non-tariff barriers rather than from the lack of security services.

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