MONTENEGRO

STATISTICAL OFFICE

Mirror Analysis Summary Report
International Trade in Goods Statistics

Podgorica, December 2015

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1. Introduction

Mirror analysis of foreign trade data is one of the most commonly used instruments for comparison data quality of external trade statistics between partner countries in trade.

Generally speaking, a mirror analysis consists of comparing export from a country or a group of countries A to country or group of countries B, as reported by A, with import into B from A, as reported by B, and vice versa. In principle two values should be equal but in practice it is often not the case, i.e. there are differences in values. Asymmetries can be measured in different ways (relative, absolute, weighted, etc.), using different indicators (statistical value, net mass, supplementary quantity) and at different levels (country, chapter, 8-digit product code, etc.).

There are a number of possible reasons for asymmetries, which can be divided into methodological and non-methodological reasons, and will be explained hereinafter.

The current Mirror Analysis Report for Montenegro is based on years 2009 to 2013 at aggregate levels, and on years 2012 and 2013 for detailed CN 8-digit level studies. This document will present the main characteristics of Montenegrin trade, a description of methodology used for the analysis, tables and charts showing observed asymmetries, a description of possible causes of asymmetries and a summary of significant findings.

2. Main characteristics of Montenegro's trade with the EU and the most important partner countries

The highest external trade turnover of Montenegro traditionally is with CEFTA and EU countries.

Table 1. External trade of Montenegro with the European Union in EUR millions

	2009		2010		2011		2012		2013	
	Value	Share%	Value	Share%	Value	Share%	Value	Share%	Value	Share%
EXPORT	143	52	189	57	273	60	189	52	156	41
IMPORT	702	42	705	43	807	44	810	44	784	44

Since the countries from West Balkans which are neighboring states of Montenegro are included in CEFTA the trade with them is most significant.

Table 2. External trade of Montenegro with the CEFTA in EUR millions

	2009		2010		2011		2012		2013	
	Value	Share%	Value	Share%	Value	Share%	Value	Share%	Value	Share%
EXPORT	119	43	126	38	138	30	144	39	186	49
IMPORT	568	34	590	36	726	40	702	39	687	39

Table 3. Asymmetries between imports of Montenegro and mirror exports of the most important trade partners in 2012 and 2013

	2012				2013			
	Import	Mirror Export	Asym-metry	Discre-pancy	Import	Mirror Export	Asym-metry	Discre-pancy
Serbia	532 886	525 886	-7 001	1,3%	505 939	540 727	34 788	6,6%
Croatia	110 436	145 945	35 059	27,4%	97 511	106 333	8 822	8,7%
Bosnia & Herzegovina	123 225	127 274	4 049	3,2%	126 202	138 353	12 151	9,2%
Greece	159 189	163 208	4 019	2,5%	149 769	161 668	11 872	7,6%
Germany	115 665	71 824	-43 841	46,8%	116 468	74 768	-41 700	43,6%

Table 4: Asymmetries between exports of Montenegro and mirror imports of the most important trade partners in 2012 and 2013

	2012				2013			
	Export	Mirror Import	Asymmetry	Discre-pancy	Export	Mirror-Import	Asymmetry	Discre-pancy
Serbia	83 360	78 711	-4 649	5,7%	133 473	109 783	-23 690	19,5%
Croatia	83 544	45 238	-38 306	59,5%	59 548	4 335	-55 213	172,9%
Bosnia & Herzegovina	37 413	28 379	967	3,5%	18 385	18 498	112	0,6%
Greece	3 575	51 079	47 504	173,8%	3 594	56 329	52 734	176%
Kosovo	22 968	10 510	-12 458	74,4%	19 177	11 387	-7 790	51,0%

Worldwide, the most important partners during last two available years, at import side, are Serbia, Greece, China, Bosnia and Herzegovina and Germany.

At export side they are Serbia, Croatia, Slovenia, Bosnia and Herzegovina and Kosovo.

3. Methodology used for the Mirror Analysis

3.1. Data used

For the purpose of this analysis, mirror statistics were compared, using the statistical value in euros. Comparisons between Montenegro and the EU, Montenegro and Serbia, Croatia, Greece, and Bosnia and Hercegovina were undertaken. Aggregate-level comparisons (totals by partner, chapter level) were based on the latest available 2009-2013 data. Trends in data discrepancies were analysed. The comparisons of detailed data (8-digit Combined Nomenclature) were based on the latest available two years data. The most important products with highest discrepancies were indicated.

The 'partner' is the country or group of countries to/from which goods are exported/ imported by the reporter. The partner country is usually the country of last known destination for exports, and either the country of origin or the country of consignment for imports. The current mirror analysis was based on the country of origin/country of last known destination.

Montenegro's main partners (in value, year 2013) at imports are 1.Serbia, 2.Greece, 3.China, 4.Bosnia and Herzegovina and 5.Italy. At exports, the main partners are: 1. Serbia, 2.Croatia, 3. Slovenia, 4. Kosovo and 5. Bosnia and Herzegovina. Out of these countries Serbia (1st) and Bosnia and Herzegovina (4th) for imports, and Serbia (1st) and Kosovo (4th) for exports are also beneficiaries of IPA 2012.

In the analysis all statistical procedures were used and aggregated. The Combined Nomenclature was used as commodity classification.

3.2. Data sources

The data source was Eurostat's Easy Comext, dataset 'EU Trade since 1988 by CN8' for EU data, dataset 'Western Balkan and Candidate Countries Trade Since 2002 by CN' for non-EU data.

3.3. Indicators used and associated formulas

For the purpose of ITGS mirror analyses, the statistical value is usually the only indicator used. Asymmetries are measured by applying the following formulae to the data:

$$Asymmetry = Mirror\ Value(P) - Value(R)$$

$$Discrepancy = ABS(\frac{Mirror\ Value(P) - Value(R)}{(Mirror\ Value(P) + Value(R))/2})$$

Where:

- *R* is the Reporter
- *P* is the Partner
- *Value* is the statistical value as recorded by the Reporter
- *Mirror Value* is the mirrored statistical value as recorded by the Partner.

"Asymmetry" measures the difference between the two recorded (mirrored) values.

"Discrepancy" is the absolute value of the Asymmetry, divided by the average of the two mirrored values.

When asymmetries are calculated on several components (by chapter, by country, etc.) another indicator is used to better reflect the real asymmetry at global level. It is called the "Weighted Average Discrepancy", or "WAD":

- WAD = $$\dfrac{\sum\limits_{C} Weight(C) * Discrepancy(C)}{\sum\limits_{C} Weight(C)}$$

Where:

- *C* represents the components

- *Weight(C)* is the average of the two mirrored values

From these formulas, one can conclude:

- the minimum Discrepancy is 0% when both values are identical

- positive Discrepancy indicates that the mirror value > reported value, negative Discrepancy indicates that the reported value > mirror value

- the maximum Discrepancy is +/- 200% when one of the two values is missing

- the Discrepancy is +/- 100% when the Asymmetry equals (in absolute value) the average value

- the WAD is greater than or equal to the total Discrepancy. It is equal to the total Discrepancy when asymmetries are all positive or all negative.

In accordance with the defined rules of mirror analysis, the following three levels of discrepancies are distinguished:

☐ **From 0% to 15%** - the discrepancy is considered low.

☐ **From 15% to 50%** - the discrepancy is considered medium. Higher than 30% discrepancy deserves additional analysis.

☐ **More than 50%** - discrepancy is considered high, indicating irregularities or very serious imbalances in the external trade figures.

4.   Description of Possible Causes of Asymmetries

There are many cases and reasons leading to asymmetries between the reported data of two countries. It should be borne in mind that their occurrences do not necessarily indicate data error on either side, but it may be the result of the influence of some valid factors. Accordingly the reasons can be classified into two basic groups, namely caused by the methodology of ITGS or by errors in reporting.

Main methodological reasons are:

- *Valuation* – depends on the value used when the external trade data are processed-customs, statistical or invoiced value, at CIF or FOB valuation.
- *Partner countries used for the mirror analysis* – might be country of origin or the country of consignment for imports and the country of the last known destination for exports. While the country of consignment for imports is consistent with the country of last known destination for exports (both follow the physical movement of goods), the country of origin is not. Using country of origin for the mirror analysis brings significant discrepancy into the figures compared for more than one partner country. On the one hand, the given import is missing from the export of the country of origin (except when the country of origin is, at the same time, the country of consignment, as well), and on the other, it is included in the export of the country of consignment (which cannot be detected in the import declaration).
- *"Rotterdam effect"* – It might concern trade between an EU and a non-EU country. EU traders have an option to carry out import or export customs formalities in any Member States, regardless of whether the goods were directly dispatched from another Member State (in the case of exports) or are intended to be immediately dispatched to another Member State for final use(in the case of imports). Importers make particular use of this facility in order to release goods for free circulation at the earliest possible moment, often at the external frontier of the European Union. Once customs duties have been paid, the parties concerned are able to dispose freely of the goods without having to consider further customs supervision regulations or provide a guarantee for any duties payable. This both increases the availability of the goods and avoids losing interest on the guarantee. An extra-EU import has to be reported by the Member State where the goods are cleared for Customs (MS A). When the goods are subsequently moved to the Member State of final destination (MS B), an Intrastat dispatch must be recorded in MS A and an arrival in MS B. This results in an asymmetry between the non-EU country and both EU Member States (A and B).
  The "Rotterdam Effect" also concern export movements from the European Union.
  The exporters are free to carry out customs clearance not in the actual Member State of consignment, but in the Member State of exit, i.e. the Member State from which the goods are actually leave the statistical territory of the Community. This may introduce an asymmetry with the non-EU country of destination, where the export transaction will be registered by the "wrong" partner country.
- *Value of goods* less than EUR 1 000 or net mass less than 1 000 kilograms - Given that Montenegro is a small country and a small economy, there are a number of customs declarations, which value does not exceed EUR 1 000 of value or 1 000 kilograms of net mass. While Montenegro's external trade data includes customs declarations with values

and/or net masses below those limits, partner countries might exclude such items in line with EU legislation.

- **Trade system** - The applied trade system special or general trade system represents an additional reason for existing deviations in the mirrored data. In dependence of which trade system is used in the external trade data processing, general or special one, this is one of possible reasons for deviations in the data between two countries because the coverage of the two systems are different. Discrepancies in the data between the two countries are inevitable if different trade systems are used in the comparison.

- **Time of registration** – A time lag might occur between the registration of exports and that of the corresponding imports. Time lag may be an important source of discrepancy's, as goods shipped from the country of dispatch towards the end of the reporting period may be registered only in the following reporting periods in the country of arrival. The date of acceptance by the Customs should be considered as reference period for the Extrastat declarations.

- **Data confidentiality** - is a further reason for asymmetry, implying that certain customs tariffs do not show within the published data creating additional burden for the comparison between countries. The more detailed data are compared, the more distorting the effect of confidentiality is.

The most common errors in reporting are:

- **Product Misclassification** - Goods are often wrongly classified by the reporting enterprieses. Possible solutions might be the further development of the tools for better classification of the goods or the implementation of an automatic detection method of possible misclassification.

- **Triangular trade** – Country A sells the product to country B, which in turn sells it to country C. The product is transported from A to C directly and these two countries often do not know about each other, they both think that country B is their partner. Thus, both will name country B as country of final destination and country of consignment, respectively. At the same time country B in line with ITGS methodology, will not declare any movements of goods, since it is not involved in the physical movements (only in the movement of invoices).

- **Value of special goods,** such as gas, electricity, sea products, ships, airplanes, etc. – Specific goods often require additional data sources or estimation methods which are not harmonised over the countries.
  Movements of gas and electricity should be collected on the same principles than the other movable goods i.e. physical movements through the national borders, exclusion of simple transit, same definition of partner country (country of consignment for imports and country of final destination for exports). Nevertheless, in practice, when other data sources are used (in particular, information coming from the grid operators), the correct identification of the partner country or the exclusion of simple transit are difficult to achieve.
 Vessels and aircraft should be controlled through the information coming from national registers.

- ***Valuation of processing trade*** – Goods to/from processing should be included in trade statistics. Processing covers operations (transformation, construction, assembly enhancement, renovation, modification, conversion) with the objective of producing a new or a significantly improved item.

- This does not necessarily involve a change in the product classification. The valuation of goods can be problematic both in unprocessed (goods for processing) and processed (goods after processing) states. While in the former case usually no invoice is issued and the processor does not know the value of the goods, in the later case companies frequently report value added(processing fee) instead of the total value. As a consequence movement of goods for/after processing can be important causes for asymmetries.
- ***Exclusion in case of borderline cases*** between trade in goods or services (repairs versus processing), product with embedded services, digital products etc.

5. Summary of Findings

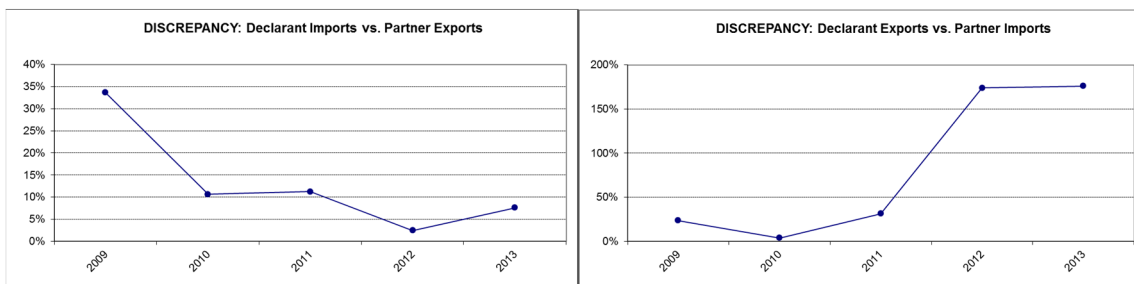Observed discrepancy with **EU28**:
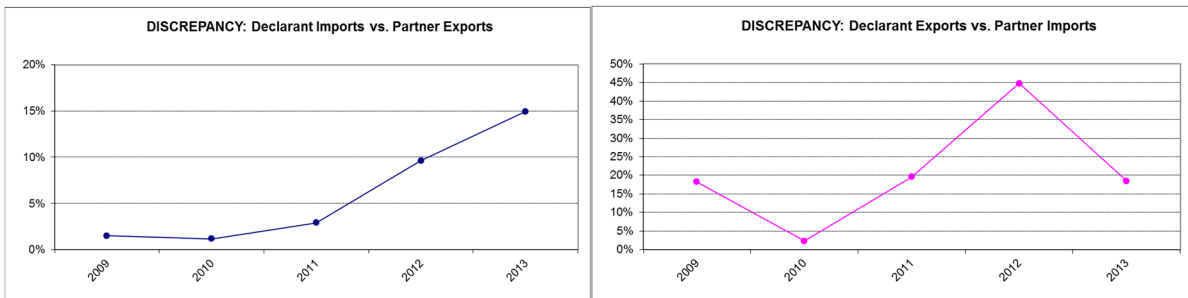
The discrepancy between Montenegro imports and EU exports is relatively low from 2009 to 2011, and then it increases significantly in 2012 and 2013. Except in 2010, the discrepancy between Montenegrin exports and EU imports is high, especially in 2012 when it reaches 45%.
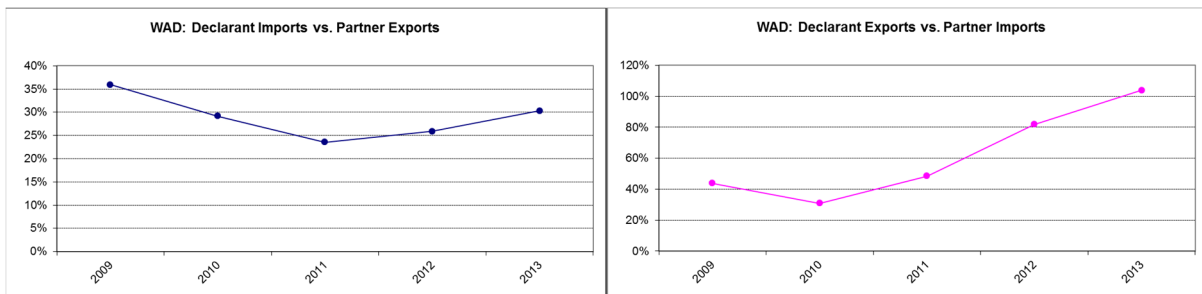
Although the discrepancy between Montenegrin imports and EU exports is relatively low from 2009 to 2011, the weighted average discrepancy (WAD) with the individual EU Member States is relatively high, revealing a probable partner country allocation issue. The same can be said of Montenegrin exports, where the discrepancy is getting worse over the years.

In 2013, **Greece** is Montenegro's second largest trade partner in value, for imports.
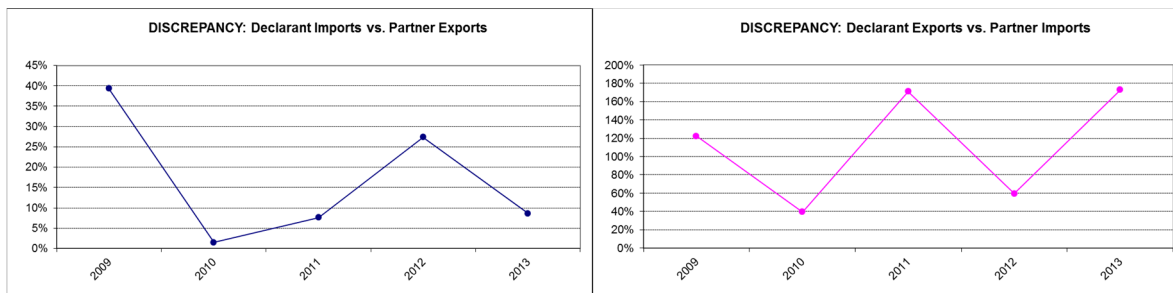
Observed discrepancy with Greece:

While the import asymmetry is fairly good in 2010-2013 the export asymmetries are extremely high in 2012 and 2013.

In 2013, **Croatia** is Montenegro's seventh largest partner for imports and the second partner for exports.
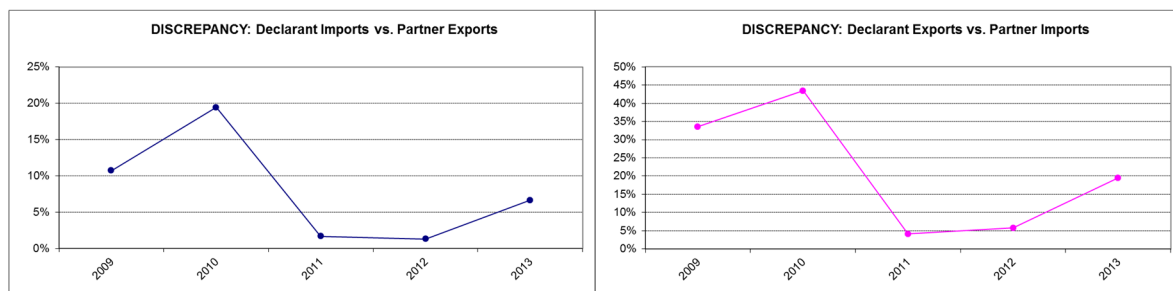
Observed discrepancy with Croatia:

Discrepancy with Croatia is high, especially for exports.

Serbia is Montenegro's first partner both in imports and exports in 2013.
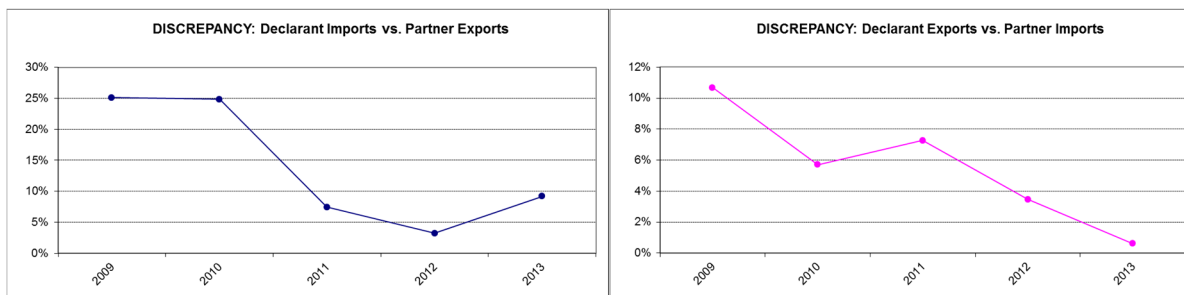
Observed discrepancy with Serbia:

The import asymmetry with Serbia is pretty good from 2011 onwards. Export asymmetry is rather high in 2009 and 2010.

In 2013, **Bosnia and Herzegovina** is Montenegro's fourth largest import partner and its fifth largest export partner.

Observed discrepancy with Bosnia and Herzegovina**:**

Import asymmetries are high in 2009 and 2010, improving from 2011 onwards, while export asymmetries are fairly low and gradually improving, down to practically zero in 2013.

6.   Analysis of the Results

Asymmetry with the EU Member States

1. *At import side, from 2009 to 2013, Germany (DE) is one of the most important partners of Montenegro (ME). The discrepancy with this partner is constantly very high (lowest: 43.6%; highest: 64.9%). The asymmetry is always negative (ME declaring more than DE).*

Reason for discrepancy: Country of origin vs. country of consignment, "Rotterdam effect".

One of possible causes for deviations in data could be Country of origin vs. Country of consignment and "Rotterdam effect". INTRASTAT trade system does not oblige to provide the country of origin but only country of import, arrival of goods, while EXTRASTAT system obliges entering the country of origin. So Montenegro keeps record on import from Germany as country of origin, while production was in Slovenia, Italy and France. Germany is typically the country where the majority of the fairly high discrepancies are likely to be due to the application of country of origin for comparison, i.e. many products of Germany origin are actually dispatched from other Member States. Besides, the Rotterdam effect might also account for significant asymmetry.

Possible measures: The first reason could only be eliminated by comparing country of consignment on imports with country of final destination on exports. By the accession of Montenegro in EU and with the implementation of Intrastat, the country discrepancies like this will be eliminated and the Rotterdam effect will be more easily reduced.

At exports side, although the EU level discrepancy is fairly low, some individual Member States show much less favourable tendencies (e.g. in year 2010, the discrepancies with some important partners, such as Italy and Greece, are very high, as are reflected by high WADs.)

Reason for discrepancy: One of the most frequent reasons is the error in the declaration of the country of final destination. In these cases, the goods were originally dispatched (and the export declared) toward Italy or Greece, but on the way the direction changed to another country which in turn become the actual country of final destination.

Possible measures: Further checks about the country of final destination.

2. *Chapter 85 (7% of total imports) shows a high discrepancy in 2013 (63.5%). At exports side, chapters 26, 27 and 87 always show a very high discrepancy.*

Reason for discrepancy: Country of origin vs. country of consignment, "Rotterdam effect".

Possible measures: By the accession of Montenegro in EU and with the implementation of Intrastat, the country discrepancies like this will be eliminated and the Rotterdam effect will be more easily reduced.

3. *Commodity '89012010' (Sea-going tankers) is not declared as an import by Montenegro in 2012, but it represents 4.6% of total EU exports to Montenegro.*

Reason for discrepancy: Possible reason could be Trade system e.g. exclusion of different customs procedures from the special trade system.

Possible measures: Further checks, regular analysis and bilateral meetings with the relevant EU countries.

4. *Commodity 87033290 (Motor cars and other motor vehicles principally designed for the transport of persons, incl. station wagons and racing cars, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a cylinder capacity > 1.500 cm³ but ...) shows a high import discrepancy in 2012. However, the relevant heading 8703 (Motor cars and other motor vehicles principally designed for the transport of persons, incl. station wagons and racing cars (excl. motor vehicles of heading 8702)) shows a low discrepancy (3.0%) but a high WAD (30.7%).*

Reason for discrepancy: The low asymmetry at heading level with a high WAD most probably indicates product misclassification.

Possible measures: Further checks, additional controls by the Customs Unit with regards to the classifications of goods.

5. *Commodity 27101921 (Jet fuel, kerosene type which is only imported from Greece) shows a high import positive discrepancy in both years 2012 and 2013.*

Reason for discrepancy: Product misclassification, case of Greece.

Possible measures: By the accession of Montenegro in EU and with the implementation of Intrastat, discrepancies like this will be more easily reduced.

6. *Commodity 87033219 (Motor cars and other motor vehicles, principally designed for the transport of persons, incl. station wagons, with compression-ignition internal combustion piston engine "diesel or semi-diesel engine" of a cylinder capacity > 1.500 cm³ but <= 2.500 cm³, ...) shows a high export positive discrepancy in 2012 and 2013.*

Reason for discrepancy: Product misclassification, "Rotterdam effect".

Possible measures: Further checks, additional controls by the Customs Unit whit regards to the classifications of goods. By the accession of Montenegro in EU and with the implementation of Intrastat, discrepancies like this will be more easily reduced.

Asymmetry with Greece

1. *Chapter 27 represents more than 90% of total imports from Greece in 2011, 2012 and 2013. No asymmetry can be observed.*

In the Greek export, chapter 76 (Aluminium and articles thereof) represents more than 97% in value throughout the years. Discrepancies are very high in 2012 and 2013.

Reason for discrepancy: Triangular trade, "Rotterdam effect".

Aluminium was probably imported to Greece from some other countries which are only mediators, but which appear in Montenegro's data as country of final destination (like Hungary, Slovenia, Bosnia and Herzegovina and Romania). The sum of exports of aluminium in 2012 to these countries is almost equal to the asymmetry with Greece. If all exports of aluminums were reported right into Greece the discrepancy would be only 0.6% in both 2012. and 2013. The deviations were low and medium in the 2009-2011 period.

Possible measures: Cases of triangular trade are fairly difficult to disclose, but consultations with the relevant countries might help.

2. *Commodities 27101921 (Jet fuel, kerosene type) and 27101947 (Gas oils of petroleum or bituminous minerals, with a sulphur content of > 0,002% but <= 0,1% by weight (excl. containing biodiesel, and for undergoing chemical transformation)) show a high positive discrepancy for imports, for both years of 2012 and 2013. However, when aggregating discrepancy to heading level (2710) the discrepancy is very low (1.9% in 2012 and 7.7% in 2013), with a fairly high WAD in 2012 (16.5%).*

Reason for discrepancy: Potential misclassification issue.

Possible measures: Further checks, additional controls by the Customs Unit with regards to the classifications of goods.

3. *Commodity 76011000 (Aluminium, not alloyed, unwrought) counts for 94.0% of total Montenegro exports to Greece in 2012, and 99.1% in 2013.*

Reason for discrepancy: Country of origin vs. Country of consignment, "Rotterdam effect**".**

Possible measures: By the accession of Montenegro in EU and with the implementation of Intrastat, discrepancies like this will be more easily reduced.

Asymmetry with Croatia

1. *In 2012, Montenegro recorded imports of commodity 89012010 (Sea-going tankers), but Croatia did not record any exports of this commodity.*

Reason for discrepancy: Possible reason could be the trade system namely the application of different customs procedures for the same movements of goods resulting in the inclusion or exclusion of the given transaction according to the specification of the trade system. For instance, both countries show only import of this commodity in 2012, which could be the consequence of using different customs procedures for transactions of inward/outward processing.

Possible measures: Further checks, regular analysis and bilateral meetings with neighbor countries.

2. *In both 2012 and 2013, commodities 25232900 (Portland cement (excl. white, whether or not artificially coloured)) and 25239000 (Cement, whether or not coloured (excl. portland cement and aluminous cement)) show an important positive discrepancy in Montenegro's imports. However the discrepancy is very low at the level of relevant heading (2523) 0.7% in 2012 and 0.3% in 2013.*

Reason for discrepancy: Country of origin vs. Country of consignment and misclassification.

Possible measures: Further checks, additional controls by the Customs Unit with regards to the classifications of goods.

3. *Commodity 76011000 (Aluminium, not alloyed, unwrought) accounts for 96.0% of total Montenegro exports to Croatia in 2012, and 95.4% in 2013. However Croatia declares hardly any imports of this commodity from Montenegro.*

Reason for discrepancy: Country of origin vs. Country of consignment.

Possible measures: Further checks, additional controls by the Customs Unit with regards to the classifications of goods. By the accession of Montenegro in EU and with the implementation of Intrastat, discrepancies like this will be more easily reduced.

4. *In 2012, Croatia declared import of commodity 89012010 (Sea-going tankers) while Montenegro did not declare any export of this commodity to Croatia.*

Reason for discrepancy: Possible reason could be the inclusion/exclusion of different customs procedures into/from the special trade system. Montenegro has recorded this turnover with Croatia through customs procedure 31 53, which is not part of the special trade system according to which the Montenegrin external trade data are processed (the actual activity giving rise to the movement of goods is renovation of tankers, i.e. repairs, which should be excluded from ITGS).

Possible measures: Further checks, regular analysis and bilateral meetings with neighbor countries.

Asymmetry with Serbia

1. *Commodity 27160000 (Electricity) shows a high positive discrepancy in 2012 Montenegro's imports. The discrepancy for this commodity at exports side is also high both in 2012 and 2013.*

Reason for discrepancy*:* The discrepancy affecting export of Montenegro and import of Serbia are of methodological nature, i.e. use of different trade systems and different customs procedures as parts of the trade system. Another cause could be some loans of electricity, which are not recorded via the customs declarations.

Possible measures: Further methodological harmonization to adjust the trade systems to solve the problem of loaning electricity.

2. *Commodity 30049000 (Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic purposes, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale (excl. medicaments containing antibiotic...) shows an important positive discrepancy at exports in 2012 and 2013.*

Reason for discrepancy: Country of origin vs. country of consignment. It often happens that the goods are declared for exports to a country of intended destination, but on the way the direction is changed and the products are finally imported into another country. Since the majority of asymmetries were detected with Serbia, the reason might also be of methodological nature, namely the inclusion/exclusion of different customs procedures in/from ITGS.

Possible measures: Further methodological harmonization.

Asymmetry with Bosnia and Herzegovina

1. *Commodity 27160000 (Electricity) shows a high positive discrepancy in both 2012 and 2013 in Montenegro's imports.*

Reason for discrepancy: Causes for discrepancies are of methodological nature, i.e. use of different trade systems and different customs procedures as parts of certain trade system. Another cause could be some loans of electricity, which are not recorded via customs declarations.

Possible measures: Further methodological harmonization to adjust the trade systems and to solve the problem of loaning electricity.

2. *Commodity 41012010 (Whole raw hides and skins of bovine "incl. buffalo" or equine animals, whether or not dehaired, unsplit, of a weight per skin <= 16 kg, fresh) shows a high positive discrepancy at exports side.*

Reason for discrepancy: Misclassification issue.

Possible measures: Further checks, additional controls by the Customs Unit with regards to the classification of goods.

7. Conclusions

The main purpose of mirror analysis is to identify challenging issues and to improve the quality and comparability of data, at least to a certain extent. It helps the statisticians to acquire some information about the course of events often hidden behind the data. When discrepancies cannot be eliminated, the deeper understanding of the reasons greatly assists statisticians, when it comes to explaining to users why data, which should be the same, are different after all.

Nevertheless, comparing external trade data is most often not a simple task, given the numerous possible reasons behind, as listed in Chapter 4. The list is by no means exhaustive; it just summarizes the most common factors. The frequent changes, which might be detected in the practical ways of carrying out trade transactions due to the profit maximizing efforts of trade operators, often bring about new reasons of asymmetry. Most of these changes are triggered by the transformations of the legal environment, when some old practice of trade should be dropped and new ways could be found.

Asymmetries might be caused by methodological reasons, as well as by data errors. Most methodological reasons, being integral parts of the ITGS system, cannot be eliminated, just disclosed and explained. In contrast, correction of data errors is most desirable.

Regarding the Montenegrin data, the most significant methodological reasons for asymmetries are supposed to be the choice of partner country for the analysis, the "Rotterdam Effect", and the differences in the customs procedures included in the trade systems. The differences between CIF and FOB valuation is only likely to cause higher asymmetry when the mirror analysis is conducted with far away partners; other IPA countries and the significant EU Member States involved in the current study are close to Montenegro. From among the alternatives of erroneous data reporting misclassifications of commodities on either side are the most frequent cases.

Although the analysis showed a low asymmetry with the EU as a whole, at country level the highest discrepancy was detected on the export side in 2012. Differences were caused mainly by two commodities aluminium that was imported to Greece from another MS (because of country of consignment and/or triangular trade) and sea-going tankers with Croatia (both countries show only import of this commodity as a consequence of using a different customs procedure).

When the asymmetry is considered in value terms, it is not surprising that the most significant differences occur with countries having the highest value of trade with Montenegro. Just an example: After Croatia, which has traditionally been one of the main partners of Montenegro, joined the EU in 2013, the discrepancy with the EU started to grow.