



# MONTENEGRO

## SELECTED ISSUES

March 2016

This Selected Issues paper on Montenegro was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on February 8, 2016.

Copies of this report are available to the public from

International Monetary Fund • Publication Services  
PO Box 92780 • Washington, D.C. 20090  
Telephone: (202) 623-7430 • Fax: (202) 623-7201  
E-mail: [publications@imf.org](mailto:publications@imf.org) Web: <http://www.imf.org>  
Price: \$18.00 per printed copy

**International Monetary Fund**  
**Washington, D.C.**



# MONTENEGRO

## SELECTED ISSUES

February 8, 2016

Approved By  
European Department

Prepared By Yuko Hashimoto (STA)

## CONTENTS

<b>EXPLAINING MONTENEGRO'S EXPORT PERFORMANCE</b>	<b>2</b>
<b>EXPORT SECTOR FACTS</b>	<b>2</b>
<b>EXPLAINING EXPORT PERFORMANCE</b>	<b>4</b>
<b>NON-PRICE BARRIERS</b>	<b>8</b>
<b>CHALLENGES FROM A NARROW PRODUCTION BASE</b>	<b>9</b>
<b>KEY CHALLENGES</b>	<b>11</b>
References	12
<b>FIGURES</b>	
1. Persistent Net Trade Deficit	3
2. Weak Export Recovery Compared with Peers	3
3. Exports to Euro Area have Declined Despite Euroization	4
4. Foreign Income Strongly Associated with Services, but not Goods	5
5. High Non-Price Barriers in the Export Sector	9
6. Share of High Value Added has Declined in the Export Sector	10
7. Raw Materials Goods Exports are Highly Correlated with Commodity Prices	11
<b>TABLES</b>	
1. Montenegro's Exports: Foreign Demand Model Results	6
2. Montenegro's Goods Export: The Gravity Model Results	7
3. Western Balkan's Goods Exports: The Gravity Model Results	8

## EXPLAINING MONTENEGRO'S EXPORT PERFORMANCE

*Achieving a healthy trade balance and a vibrant export sector are important to ensure external sustainability and boost productivity. Yet Montenegro has run a persistent trade deficit. Despite euroization, exports to the euro area have declined, in contrast to other emerging European economies. In this paper, we look into the possible explanations of these facts. Although simple econometric models explain services exports well, non-price barriers seem to play a role in determining goods exports.*

**1. Montenegro has run a persistent trade deficit since its independence.** External debt is close to 170 percent of GDP, and fiscal space is limited. In addition, euroization implies no independent monetary policy. Hence, the health of the external sector is crucial to act as a buffer for external and domestic shocks.

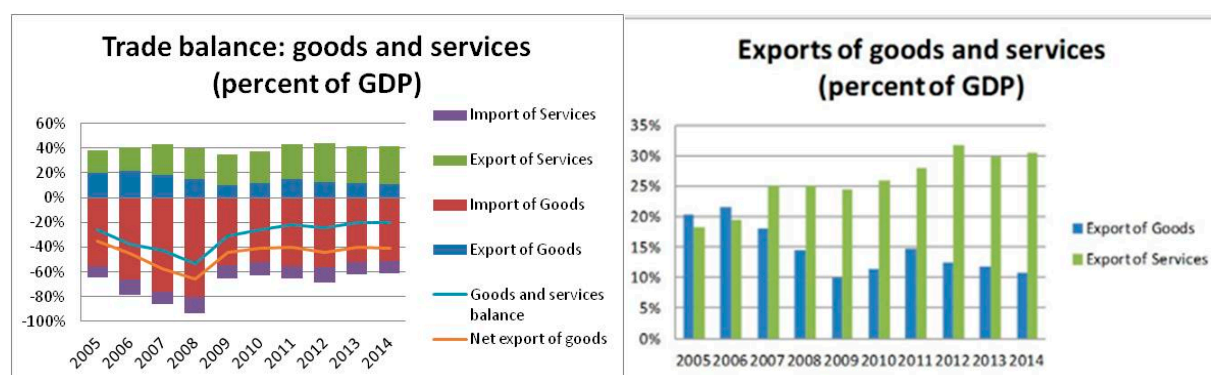
## EXPORT SECTOR FACTS

**2. Montenegro's goods exports have decreased, while goods imports have been more or less stable.** Goods exports have never recovered to the level at 2007: after a pick-up of goods exports from the crisis of 2009, exports of goods have been back on a downward trend since 2011 (Figure 1).<sup>1</sup> Montenegro's net exports of goods account for 40 percent of GDP, and its exports of goods account for 10 percent of GDP and its imports of goods 50 percent of GDP in 2014. On the other hand, exports of services have been on an increasing trend, reaching 30 percent of GDP, balancing trade to some extent.

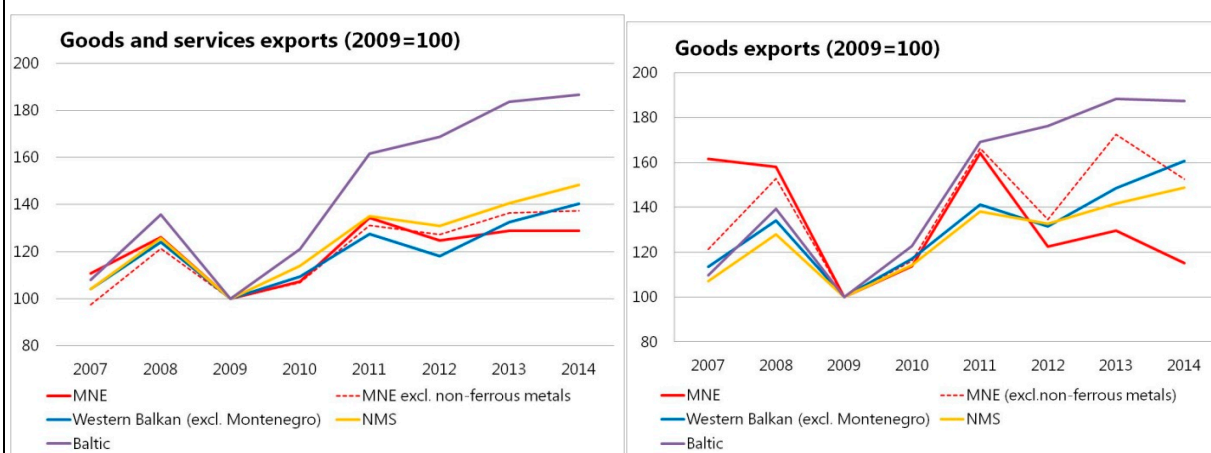
**3. A comparison reveals a relatively weak recovery of goods exports for Montenegro.** The country's exports (goods and services) have not grown as quickly as those in other Western Balkan and New Member States (NMS) countries, and, in particular, goods exports have been weakening after 2011 (Figure 2).<sup>2</sup> A decline in exports after the crisis is not a common phenomenon among the Western Balkans; it is unique to Montenegro.

<sup>1</sup> Montenegro's goods exports in 2007 and 2014 were 454.7 and 333.2 million euros, respectively. In percent of GDP, they were about 18.0 and 10.4, respectively.

<sup>2</sup> The regional aggregates follow IMF (2015), except that the New Member States (NMS) do not include Baltic countries in this paper. For Figure 2: Western Balkan (excl. Montenegro) includes Albania, Bosnia and Herzegovina, Croatia, Kosovo, FYR Macedonia and Serbia; NMS include Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic, and Slovenia; and Baltic includes Estonia, Latvia, and Lithuania.

**Figure 1. Montenegro: Persistent Net Trade Deficit**

Source: MONSTAT, and IMF staff calculations.

**Figure 2. Montenegro: Weak Export Recovery Compared with Peers**

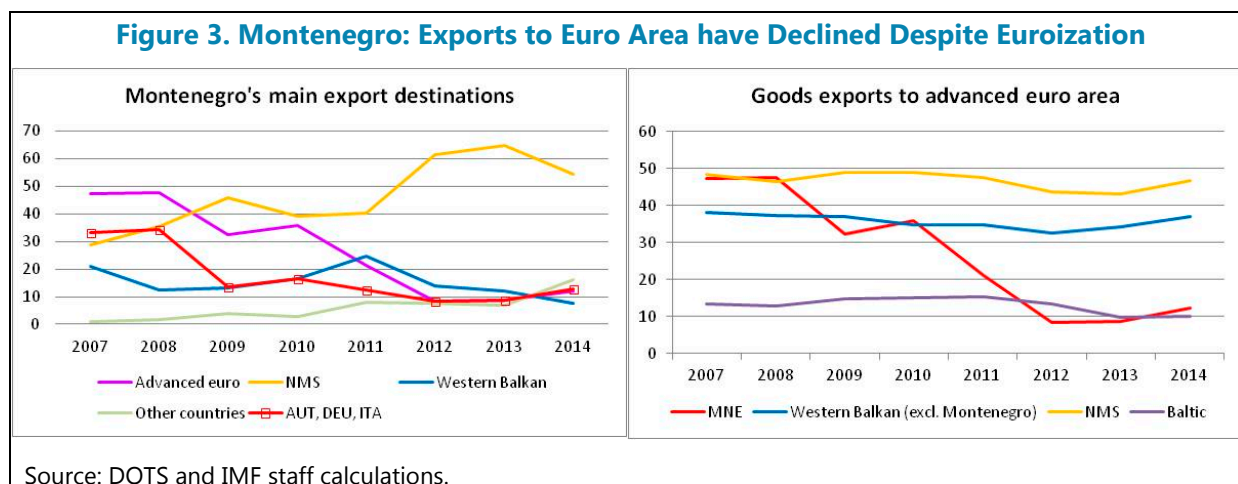
Source: Direction of Trade Statistics, and IMF staff calculations.

#### 4. Declining aluminum production explains some of the decline in goods exports.

Aluminum production fell during the course of the privatization of the company KAP, which fell into bankruptcy in 2013. Aluminum exports (as proxied by non-ferrous metals) accounted for 55 percent of the total goods exports in 2007. The share of aluminum has declined further, to 21 percent of total goods exports. When exports of non-ferrous metals are taken out, total goods exports have been increasing modestly since 2008. On this basis, the recovery in goods exports (excluding non-ferrous metals), shown in the dotted line in Figure 2, is closer to those of regional peers, but with the same lower growth rate in recent years.

**5. Montenegro's goods exports to the euro area have declined over time despite euroization.** While other Western Balkan and NMS countries have kept their export shares to the euro area stable and relatively high over the past few years, Montenegro has significantly lost export share to euro area. Figure 3 shows Montenegro and other economies' top 15 frequent export destinations. The share of exports to advanced euro area economies once exceeded 40 percent of total exports of Montenegro, and then has significantly shrunk after the crisis of 2009. This large

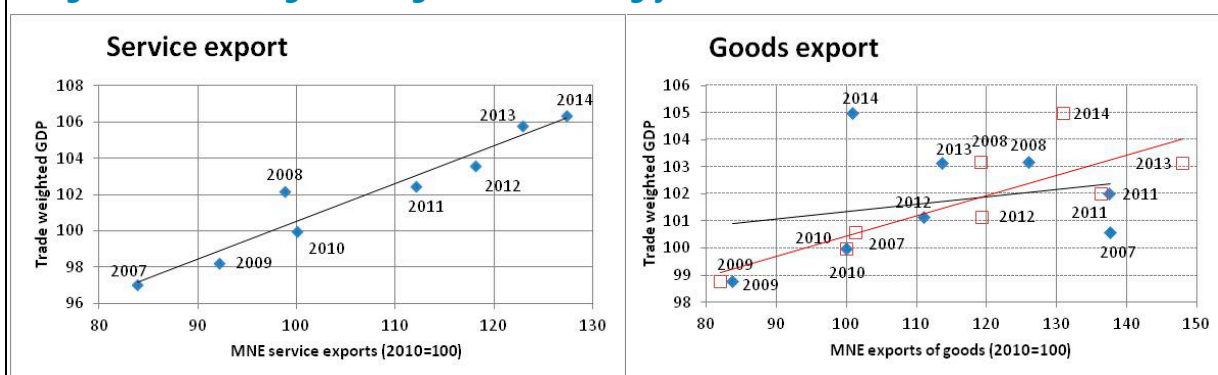
decline in export share to the euro area comes mainly from an export decline to Italy. Italy once accounted for almost one third of total exports of Montenegro in 2008, but it fell to only 10 percent in 2014. Trade ties with other Western Balkan economies have also weakened, and instead, export shares to NMS have risen.



## EXPLAINING EXPORT PERFORMANCE

**6. Foreign demand explains services exports well, but less so goods exports.** Figures below plot the trade weighted GDP of Montenegro's major export partners against Montenegro's exports (services and goods). The level of foreign income, represented by trade weighted GDP, is strongly associated with exports of services, but not exports of goods.<sup>3</sup> In addition, the slope of the fitted line between exports and foreign income is steeper than for services, implying that services exports respond more strongly to foreign income levels. The fit for goods exports is looser, implying that foreign income level is not a good explanatory variable for goods exports and suggesting that there are other unexplained factors; however, a better correlation is seen between foreign income and goods exports excluding non-ferrous metals, suggesting a significant role of decline in aluminum production in explaining recent weak goods exports performance.

<sup>3</sup> The trade weighted GDP (foreign income) of services exports are based on 16 main visitors (countries). The data are from "overnight stays" surveys of tourism by the statistics office of Montenegro. The 16 countries include Albania, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Germany, France, Hungary, Italy, Macedonia, Poland, Romania, Russia, Serbia, Slovenia and United Kingdom. For goods exports, trade weighted GDP was calculated using frequent top 13 export destinations from Direction of Trade Statistics of the IMF. The 13 countries are Albania, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Germany, Greece, Hungary, Italy, Kosovo, Serbia, Slovenia, and the United Kingdom.

**Figure 4. Montenegro: Foreign Income Strongly Associated with Services, but not Goods**

Source: MONSTAT, DOTS, and IMF staff calculations.

**7. An estimated export demand model indicates that foreign income levels and relative prices do not explain Montenegro's goods exports as well as services exports.** The significance of foreign income to Montenegro's exports was assessed using the export demand equation below, which takes the standard specification by, for example, Marquez and McNeilly (1998) and Senhadji and Montenegro (1999),

$$\log(x_t) = c + \beta_1 \log(GDP_t^f) + \beta_2 \log TOT + \beta_3 \log(GDP_{t-1}^f) + \beta_4 \log TOT + \varepsilon_t,$$

where the dependent variable,  $x$ , is nominal exports from Montenegro,  $GDP^f$  measures the trade weighted GDP of Montenegro's major export destinations, and  $TOT$  measures the relative prices of Montenegrin exports.<sup>4</sup> The foreign demand model was estimated for both goods exports and services exports separately. We also estimated foreign demand for exports goods excluding non-ferrous metals to separate out the aluminum industry's effect. The results are summarized in Table 1 and are consistent with the findings in Figure 4. Estimated coefficients of foreign income and relative prices are not statistically significantly different from zero for goods exports regressions. Again, the estimation results imply other unexplained factors, such as non-price barriers, to explain Montenegro's goods exports. However, when estimated using exports of goods excluding non-ferrous metals as the dependent variable, foreign income is significant. By comparison, Montenegro's services exports are well explained by the foreign demand model: a one percent increase in foreign income levels would boost services exports by 2.6 percent.

<sup>4</sup> Explanatory variables, foreign income for both services and goods, are trade weighted GDP calculated as explained in footnote 4 above. Terms of trade for services and goods are calculated using export and import deflators of services and goods, respectively. All variables are in log form.

**Table 1. Montenegro's Exports: Foreign Demand Model Results**

	Services exports	Goods exports	Goods exports excl. non-ferrous metals
Foreign income (t)	2.61*** (0.31)	1.74 (3.50)	4.81** (2.50)
Terms of trade (t)	0.66*** (0.21)	0.47 (1.30)	1.27 (0.93)
Foreign income (t-1)	-0.18 (0.29)	-7.41* (4.27)	-3.57 (3.04)
Terms of trade (t-1)	0.38* (0.21)	1.53 (1.43)	1.17 (1.02)
Constant	-6.66*** (1.96)	30.99 (24.84)	-0.81 (17.71)
Adjusted R-squared	0.99	0.31	0.77

Sources: IMF staff estimations.

**8. Distance plays a key role in Montenegro's goods exports.** To take into consideration potential non-price barriers in addition to foreign income and relative prices, we run the gravity model regressions following Anderson (2011) and Anderson and van Wincoop (2003) as follows:

$$\log(x_t) = c + \beta_1 \log(GDP_t^f) + \beta_2 \log(GDP_t^h) + \beta_3 \log(Population_t^f) + \beta_4 Distance + \beta_5 dummy + \varepsilon_t,$$

where  $x$  denotes bilateral trade (goods exports) between Montenegro and export destinations,  $GDP$  measures GDP per capita, and its superscript  $f$  denotes Montenegro's export destinations and  $h$  denotes home country (=Montenegro).  $Population$  denotes populations of export destinations,  $Distance$  measures distance between Montenegro and export destinations, and  $dummy$  represents regional dummies.<sup>5</sup> For a robustness check, we test two types of distance measurements—absolute value and squared value. As shown in the summary table 2 below, distance has a significant and negative value, as expected. There is a slightly better fit when using the squared distance measure, indicating the effect of distance on Montenegrin exports increases nonlinearly. Regional dummy variables—Balkan, NMS, and Euro—are also included in the gravity model regressions to see if regional linkages could be an additional explanation for Montenegro's goods exports, but no additional role was found.

<sup>5</sup> Distance data are from CEPII. Both absolute and squared distance values were used for regressions and we found the results are robust for either measurement.

**Table 2. Montenegro's Goods Export: The Gravity Model Results**

	(1)	(2)	(3)	(4)
(Distance measurement)	absolute	Squared	absolute	squared
GDP_destination	0.86 (0.74)	1.34* (0.74)	0.99 (1.18)	1.47 (1.22)
GDP_home	-0.06 (46.76)	0.17 (42.35)	5.57 (47.51)	6.71 (45.72)
Population_destination	0.576 (0.45)	0.58* (0.41)	0.34 (0.67)	0.44 (0.51)
Distance	-0.004*** (0.001)	-0.23*** (0.06)	-0.003*** (0.001)	-0.21*** (0.08)
Balkan			-1.27 (3.48)	-0.73 (3.36)
NMS			-2.77 (2.58)	-1.93 (2.49)
Euro			-1.847 (2.27)	-1.55 (2.16)
Constant	-5.08 (411.72)	-8.44 (372.95)	-53.88 (417.46)	-66.25 (401.31)
Adjusted R-squared	0.54	0.60	0.63	0.65

Sources: IMF staff estimations.

**9. Comparisons with peers show that distance plays a stronger role in Montenegro's goods exports.** Gravity model estimations for other Western Balkan economies using the specification (4) above reveal that Montenegro's goods exports are affected more strongly by distance—the coefficient on distance is larger than all other countries (except Albania, for which it is equal). That said, the model's fit, as measured by the adjusted R-squared, is lower for Montenegro, suggesting that distance does not explain the variation in the data that well.



**Table 3. Western Balkan's Goods Exports: The Gravity Model Results**

	MNE	HRV	ALB	MKD	SRB
GDP_destination	1.47 (1.22)	0.72* (0.55)	0.45 (0.81)	1.44** (0.81)	0.68* (0.49)
GDP_home	6.71 (45.72)	10.29 (22.90)	62.08* (32.98)	20.94 (17.92)	(omitted)
Population_destination	0.44 (0.51)	0.65*** (0.16)	0.67*** (0.27)	0.79*** (0.25)	0.63*** (0.18)
Distance	-0.21*** (0.08)	-0.15*** (0.02)	-0.21*** (0.04)	-0.18*** (0.03)	-0.18*** (0.03)
Balkan	-0.73 (3.36)	1.38 (1.69)	-1.58 (1.92)	1.12 (1.93)	0.32 (1.55)
NMS	-1.93 (2.49)	-0.54 (1.11)	-2.23* (1.44)	-0.73 (1.45)	-0.86 (1.13)
Euro	-1.55 (2.16)	-0.17 (0.74)	0.72 (1.21)	-0.78 (1.24)	-0.38 (0.91)
Constant	-66.25 (401.31)	-97.75 (217.28)	-516.79* (279.72)	-184.00 (153.46)	2.43 (5.36)
Adjusted R-squared	0.647	0.906	0.886	0.835	0.859

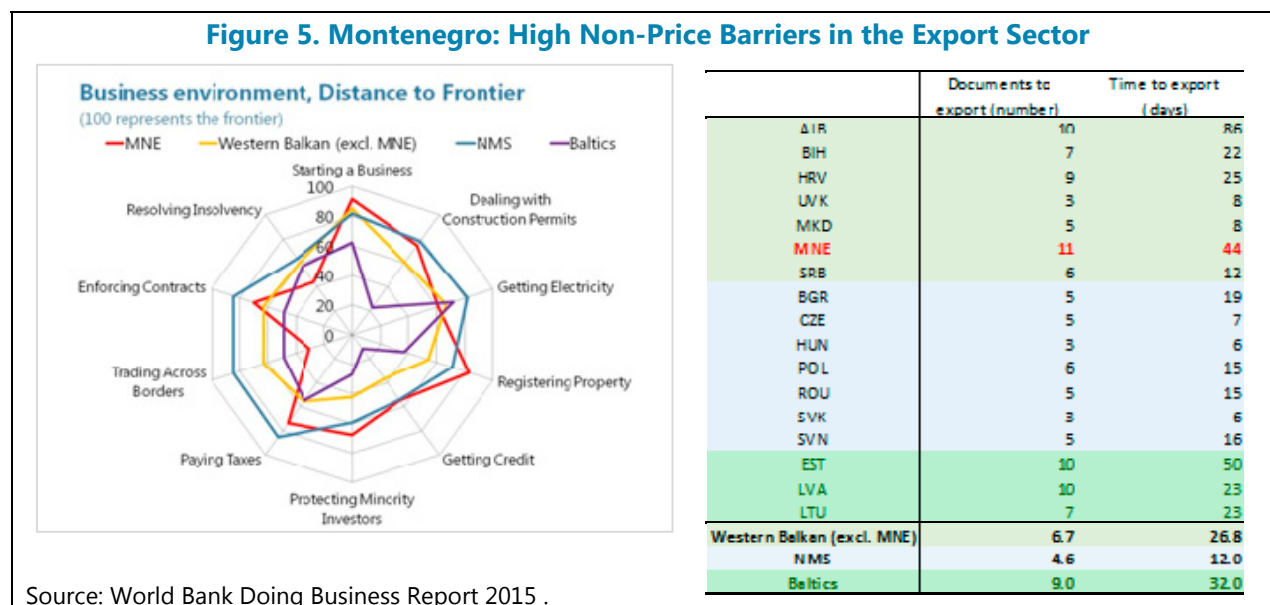
Sources: IMF staff estimations.

## NON-PRICE BARRIERS

**10. Business climate surveys indicate high non-price barriers in Montenegro's export sector.** According to the World Bank's *Doing Business Report 2015*, Montenegro has improved and is doing well, compared to neighboring countries, except in the tradables sector.<sup>6</sup> Indicators such as numbers of documents and days for exporting are larger than for most of other Western Balkan and NMS countries (Figure 5). These results point to high administration costs and inefficiency in transportation and inventory/shipment processes in Montenegro's export sector. Although the authorities are attempting to address these issues, bottlenecks in the business climate such as resolving insolvency, enforcement of contracts, and construction permits (in which Montenegro ranks relatively poorly) may hinder the reduction of non-price barriers.

<sup>6</sup> The overall ranking of the ease of doing business has improved to 36 in 2015 from 44 of the previous year, and it is second highest ranking among the Western Balkans following Macedonia FYR, which ranked 3<sup>rd</sup> in the 2015 survey report.

Figure 5. Montenegro: High Non-Price Barriers in the Export Sector



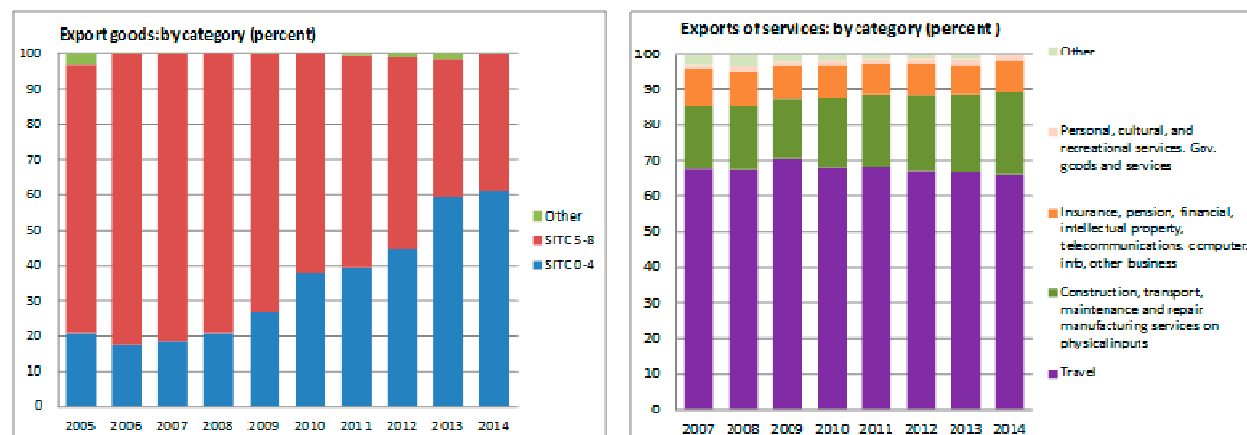
## CHALLENGES FROM A NARROW PRODUCTION BASE

**11. The share of high-value-added export goods has been diminishing over time.** By separating the export goods categories into two categories, low and high value added, we find that the share of low-value-added goods has increased to 60 percent of total goods exports in 2014.<sup>7</sup> This is partially explained by the large decline in non-ferrous metals (aluminum) exports in the past years. An increasing trend of low value added goods raises questions about labor cost competitiveness (Figure 6).

**12. Services exports also signal narrow productivity gains.** Travel and construction sectors consist of close to 90 percent of total services exports, whereas high value added services such as insurance, financial, and property services account only for 10 percent (Figure 6). Regarding travel services, Russia and Serbia are major consumers of tourism, which raises concerns over the concentration of services exports.<sup>8</sup>

<sup>7</sup> Low value added goods are represented by a sum of SITC 0-4 categories, including food, beverages, crude materials, mineral fuels, and animal oils. High value added goods are a sum of SITC 5-8 categories, including chemicals, manufactured goods, machinery and transport equipment, and miscellaneous manufactured articles.

<sup>8</sup> According to the 2014 tourism data from Statistical Office of Montenegro, foreign tourists account for 89 percent of the total number of tourist overnight stays. Among foreign overnight stays tourists, 30 percent are from Russia and 24 percent are from Serbia.

**Figure 6. Montenegro: Share of High Value Added has Declined in the Export Sector**

Source: MONSTAT and Balance of Payment Statistics.

**13. Weak productivity growth may hinder the export sector.** Generally, the share of higher value added exports would be expected to increase with an improvement in the business climate, accompanied by increased productivity. However, productivity growth has been weak in Montenegro.

**14. Goods exports are sensitive to global shocks and pressures from commodity importers are large.** Montenegro's raw material goods exports—agricultural products, aluminum, and metals—are highly correlated with commodity prices. Figure 7 that plots commodity prices at  $t-1$  against exports goods value at  $t$ , indicating that commodity prices are a leading indicator of goods exports. The IMF's *World Economic Outlook* projects further declines in commodity price over the medium term. Hence, the possibility that Montenegro's raw material goods exports might decrease further is not negligible, even if aluminum production recovers.

**Figure 7. Montenegro: Raw Materials Goods Exports are Highly Correlated with Commodity Prices**



Source: MONSTAT, and World Economic Outlook.

## KEY CHALLENGES

**15. Improving export performance through structural reforms is critical, particularly because other policy levers—monetary and fiscal—are constrained.** Montenegro's trade balance is persistently weak, raising questions about the sustainability of high external and public debt, especially given the inability to independently depreciate the currency. Part of the weak export performance can be attributed to reduction in aluminum production; it is not yet clear whether production can profitably resume. The patterns of relatively weak goods exports suggest high non-price barriers, and the increasing share of lower value added exports points to the need to boost productivity and investment the climate, increase flexibility in the economy, and raise competitiveness.

## References

- Anderson, James E., 2011, "The Gravity Model," *The Annual Review of Economics*, vol. 3(1), pp. 133–160.
- Anderson, James E. and Eric van Wincoop, 2003, "Gravity with Gravitas: A Solution to the Border Puzzle," *The American Economic Review*, vol. 93(1), pp. 170–192.
- International Monetary Fund, 2015, "The western Balkans: 15 years of economic transition," Regional Economic Issues Special Report, Washington, D.C.
- Marquez, Jaime, and Carlyl McNeilly, 1988, "Income and Price Elasticities for Exports of Developing Countries," *Review of Economics and Statistics*, Vol. 70, pp. 306–314.
- Senhadji, Abdelhak S., and Claudio E. Montenegro, 1999, "Time Series Analysis of Export Demand Equations: A Cross-Country Analysis," *IMF Staff Papers*, Vol. 46, No. 3, pp.259–273.