Trade Balance and Fuel Demand in Kosovo

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Abstract

Gasoline and diesel are the main sources of fuel required for modern life and transportation, and the adjustment of gasoline and diesel prices has become a major public issue. The drastic fluctuations in recent international oil prices have affected retail gasoline and diesel prices also in the Western Balkan countries and prompted public opinion to question the pricing behaviors of oil companies. Kosovo, in the period of 17 years, has gone from a post-conflict environment into a state which is considered to be under transition. It has passed the reconstruction period by orienting itself toward the economic development and European Integrations. Price and income elasticities of gasoline demand show whether the price policy, pursued by the Kosovo government, can decrease the high gasoline consumption sufficiently or not. The high deficit of the current account of balance of payments is also a concern for the Kosovo's economy; which is estimated up to 17.3% of the GDP after the foreign intervention. The deficit of current account is being considered is related to the energy dependency. Therefore, in order to overcome such problems, control over the gasoline demand is needed to control the deficit of current accounts.

Keywords: oil price, economic development, imports, trade deficit.

1. Introduction

Economic activities of Kosovo prior to the conflict in 1999 were focused in the industry, energy, mines and metallurgy, construction materials and processing of agricultural products. During the 90's, the Kosovo economy has marked a considerable decrease, initially due to a lack of required investments, secondly due to the devastation of production infrastructure and capacities devastated by the conflict of 1999. Therefore, Kosovo as a post-war country, as well as with a subsequent transition phase, compared to the countries of the region, has also faces a very low level of foreign investments.

In 1988, the general production of Kosovo was dominated by industry, which comprised about 50% of the GDP, whereas agriculture comprised only about 20% of GDP2.

Economic development during the 2000-2013 period was characterized by a small economic increase compared to the fairly low base at the commencement of the transition, as a generally unsustainable macroeconomic indicator, which may be observed from the table provided below.

Subject Descriptor	Units	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Gross domestic product, current prices	Billions of Euros	2.417	2.831	2.862	2.967	2.912	3.003	3.120	3.461	3.883	4.070	4.402	4.815	5.059	5.327
Inflation, average consumer prices	Percent change	n/a	11.662	3.565	0.300	-1.055	-1.39	0.62	4.36	9.35	-2.41	3.48	7.34	2.48	1.77
Volume of imports of goods and services	Percent change	n/a	-17.68	-4.87	13.81	23.52	4.28	6.36	17.71	18.66	-2.56	3.97	8.56	-14.65	1.67
General government revenue	Billions of Euros	0.249	0.362	0.509	0.590	0.615	0.628	0.720	0.898	0.943	1.140	1.164	1.305	1.322	1.312

 Table 1 Some key macroeconomic indicators

Source: International Monetary Fund, World Economic Outlook Database, October 2014

Natural resources – Republic of Kosovo has an area of 10.887 km^2 and more than 2 million inhabitants (estimate of 1991)5, and an average density of 192 inhabitants per square kilometre, represents the areas with the highest density in the Balkan peninsula. The average salary is under 220 Euro. Kosovo provides a modern system of telecommunications as well as young educated generations with a satisfactory level of informatics knowledge as well as higher levels of internet communications technologies, moreover, a considerable number of youth which is educated in western universities. Whereas, on the other hand, there is great interest from these generations to emigrate in order to find jobs due to the insufficient capacities of the Kosovor economy to generate new working positions.

Kosovo trade deficit increased to 216915 EUR Thousand in August of 2015, from a 208507 EUR Thousand deficit a year earlier, as exports shrank by 14.4 percent while imports increased slightly by 1.5 percent. Balance of Trade in Kosovo averaged - 139809.09 thousand EUR from 2003 until 2015, reaching an all time high of -46937 thousand EUR in January of 2003 and a record low of -234941 thousand EUR in September of 2012. Balance of Trade in Kosovo is reported by the Kosovo Agency of Statistics.

Kosovo has reported increasingly large trade deficits (57 percent of GDP in 2007) due to having a very weak export base. Kosovo predominantly exports metals (47 percent of total exports) and mineral products (30 percent of total exports). Kosovo's main imports are mineral products, appliances and electric materials, prepared food, beverages and tobacco. Kosovo's main trading partners are Macedonia, Germany, Italy, Serbia, China and Turkey. This page provides - Kosovo Balance of Trade - actual values, historical data, forecast, chart, statistics, economic calendar and news. Content for - Kosovo Balance of Trade - was last refreshed on Saturday, October 24, 2015.

2. Kosovo's Trade Balane

According to the Kosovo's official statistics the main groups of export are: (51.0%) base metal and articles of base metal, (12.1%) vegetable products, (7.7%) mineral products, (6.3%) prepared foodstuffs, beverages and tobacco, (5.0%) plastics, rubber and articles thereof, (4.9%) textiles and textile articles, (4.4%) machinery, appliances and electric material etc.

According to the data the main groups of import are: (18.0%) mineral products, (13.2%) machinery, appliances and electric material, (12.1%) prepared foodstuffs, beverages and tobacco, (10.0%) base metal and articles of base metal, (7.3%) products of chemical industries, (6.1%) textiles and textile articles, (5.5%) plastics, rubber and articles thereof, (5.1%) transport means etc.

Regarding the export - import of Kosovo, the main trade partners are EU participating with (31.4%) for export and (42.8%) for import comparing with the total of the September 2014, while CEFTA participation has been with (37.9%) for export and (28.0%) for import comparing with the same period. Kosovo exported in September 2014: Albania (16.3%), China (14.8%),Italy (13.9%), Macedonia (10.2%), India (9.5%), Serbia (5.3%), Montenegro (5.1%) etc.

According to the data for the period August 2014 more import we have from: Serbia (15.0%),Germany (11.2%), Turkey (9.3%), China (8.9%), Italy (6.6%,) Macedonia (5.5%), Greece (5.4%)etc.

3. Discussion

Dramatic fluctuations of recent international oil prices have caused governments and the public to pay more attention to the adjustment of gasoline prices. Based on the monthly data between 2014M1 and 2014M12, this study employed an asymmetric ECM to estimate the petrol models and price adjustment of retail sales of diesel in Kosovo. In this study, oil prices were considered the main cost of refining gasoline and diesel fuel, and had a significant relationship of long-term balance with petrol and diesel prices. An examination of the dynamic adjustments of petrol and diesel prices showed that the asymmetric adjustments were common and that the price asymmetry was especially short term. Despite the slight difference of pricing adjustments in several countries and petrol and diesel for cars, most of the price adjustments were closer to the political-economic asymmetry proposed by Kirchgässner and Kubler (1992) than the trends indicated by many other studies. In other words, even if markets gasoline and diesel marked with imperfect competition, government intervention seems to dominate the adjustments gasoline and diesel prices in the Republic of Kosovo as discussed in this study.

Table 1 Average Monthly		
Prices (2014)	Diesel	Gasoil
January	1,194	1,197
February	1,175	1,179
March	1,178	1,181
April	1,174	1,177
May	1,173	1,176
June	1,18	1,182
July	1,177	1,178
August	1,171	1,174
September	1,133	1,136
October	1,133	1,136
November	1,096	1,098
December	1,004	1,007

Conclusions

The deterioration of trade balance appears to be entirely the result of lower export prices, led by weaker energy prices. The deficit showed a smart rebound in volumes for both imports and exports in the 2014. Import volumes were up 21 per cent, while prices improved by 15 per cent, for an overall gain of 2.2 per cent in euro terms. Exports showed even better volume growth, up 1.9 per cent, but export prices fell 1.5 per cent, reducing the growth on a value basis to 0.4 per cent.

The strengthening in the volume of exports in 2014 is encouraging, and provides support to the view that the sizeable drop a year earlier was more a reflection of contracted internal demand.

References



- Akinboade, O.A., Ziramba, E. and Kumo, W.L. (2008) The Demand for Gasoline in South Africa: An Empirical Anal- ysis Using Co-Integration Technique. Energy Economics, 30, 3222-3229. http://dx.doi.org/10.1016/j.eneco.2008.05.002
- Al-Gudhea, S., Kenc, T., & Dibooglu, S. (2007). Do Retail Gasoline Prices Rise More Readily than They Fall? A Threshold Cointegration Approach. *Journal of Economics and Business*, 59, 560-574. http://dx.doi.org/10.1016/j.jeconbus.2006.10.002
- Alves, D.C.O. and Bueno, R.D. (2003) Short-Run, Long-Run and Cross Elasticities of Gasoline Demand in Brazil. Energy Economics, 25, 191-199. http://dx.doi.org/10.1016/S0140-9883(02)00108-1
- Bachmeier, L. J., & Griffin, J. M. (2003). New Evidence on Asymmetric Gasoline Price Responses. Review of Economics and Statistics, 85, 772-776. http://dx.doi.org/10.1162/003465303322369902
- Bacon, R. W. (1991). Rockets and Feathers: The Asymmetric Speed of Adjustment of U.K. Retail Gasoline Prices to www.sciedu.ca/ijfr International Journal of Financial Research Vol. 4, No. 3; 2013 Cost Changes. Energy Economics, 13, 211-218. http://dx.doi.org/10.1016/0140-9883(91)90022-R
- Baranzini, A. and Weber, S. (2013) Elasticities of Gasoline Demand in Switzerland. Energy Policy, 63, 674-680. http://dx.doi.org/10.1016/j.enpol.2013.08.084
- Bettendorf, L., van der Geest, S. A., & Varkevisser M. (2003). Price Asymmetry in the Dutch Retail Gasoline Market. Energy Economics, 25, 669-689. http://dx.doi.org/10.1016/S0140-9883(03)00035-5
- Bhattacharyya, S.C. and Blake, A. (2009) Domestic Demand for Petroleum Products in MENA Countries. Energy Pol- icy, 37, 1552-1560. http://dx.doi.org/10.1016/j.enpol.2008.12.028
- Borenstein, S., Cameron, A. C., & Gilbert, R. (1997). Do Gasoline Prices Respond Asymmetrically To Crude oil Price Changes? *The Quarterly Journal of Economics*, 305-339.
- Chen, L. H., Finney, M., & Lai, K. S. (2005). A Threshold Cointegration Analysis of Asymmetric Price Transmission from Crude Oil to Gasoline Prices. *Economics Letters*, 89, 233-239. http://dx.doi.org/10.1016/j.econlet.2005.05.037
- Chou, K. W. (2012). Price Adjustment in Taiwan Retail Gasoline Market. International Journal of Economics and Finance, 4(7), 132-140. http://dx.doi.org/10.5539/ijef.v4n7p132
- Dahl, C. and Sterner, T. (1991) Analysing Gasoline Demand Elasticities: A Survey. Energy Economics, 13, 203-210. http://dx.doi.org/10.1016/0140-9883(91)90021-Q.
- Dahl, C.A. (2012) Measuring Global Gasoline and Diesel Price and Income Elasticities. Energy Policy, 41, 2-13. http://dx.doi.org/10.1016/j.enpol.2010.11.055
- Eltony, M.N. and Al-Mtairi, N.H. (1995) Demand for Gasoline in Kuwait: An Empirical Analysis Using Cointegration Techniques. Energy Economics, 17, 249-253. http://dx.doi.org/10.1016/0140-9883(95)00006-G

Engel, R.F. and Granger, C.W.J. (1987) Co-Intergration and Error Correction: Representation, Estimation, and Testing. Econometrica, 55, 251-276. http://dx.doi.org/10.2307/1913236

- Engle, R. F., & Granger, C. W. J. (1987). Co-Integration and Error Correction: Representation, Estimation, and Testing. *Econometrica*, 55, 251-276.
- Espey, M. (1998) Gasoline Demand Revisited: An International Meta-Analysis of Elasticities. Energy Economics, 20, 273-295. http://dx.doi.org/10.1016/S0140-9883(97)00013-3.
- European Gasoline Markets. Energy Economics, 25, 175-190. http://dx.doi.org/10.1016/S0140-9883(02)00102-0
- Frey, G., & Manera, M. (2007). Econometric Models of Asymmetric Price Transmission. Journal of Economic Surveys, 21, 349-415.
- Galeotti, M., Lanza, A., & Manera, M. (2003). Rockets and Feathers Revisited: An International Comparison on
- Godby, R., Lintner, A. M., & Wandschneider, T. S. B. (2000). Testing for Symmetric Pricing in the Canada Retail Gasoline Market. *Energy Economics*, 22, 349-368. http://dx.doi.org/10.1016/S0140-9883(99)00030-4
- Granger, C. W. J., & Lee, T. H. (1989). Investigation of Production, Sales and Inventory Relationships Using Multicointegration and Non-Symmetric Error Correction Models. *Journal of Applied Economics*, 4, S145-S159. <u>http://dx.doi.org/10.1002/jae.3950040508</u>
- Gujarati, D.N. (2004) Basic Econometrics. 4th Edition, MC-Graw-Hill, Classical Normal Linear Regression Model (CNLMR), Boston, Massachussets, 107-118.
- Johnson, R. N. (2002). Search Costs, Lags and Prices at the Pump. Review of Industrial Organization, 20, 33-50.

- Karrenbrock, J. D. (1991). The Behavior of Retail Gasoline Prices: Symmetric or Not? Federal Reserve Bank of St.
- Kirchgassner, G., & Kubler, K. (1992). Symmetric or Asymmetric Price Adjustment in the Oil Market: An Empirical Analysis of the Relations between International and Domestic Prices in the Federal Republic of Germany 1972-1989. Energy Economics, 14, 171-185.
- Louis, 73, 19-29.
- Manning, D. N. (1991). Petrol Prices, Oil Price Rises and Oil Price Falls: Some Evidence for the UK since 1972. Applied Economics, 23, 1535-1541.
- Ministry of Trade and Industry, Bulletin, Prishtina, 2013
- Ministry of Trade and Industry, Annual Report, Prishtina, 2013
- Ministry of Trade and Industry, Trend of Foreign Investments in Kosovo, 2013
- Ministry of Environment and Spatial Planning, Kosovo Institute for the Protection of Nature, Natural, Heritage Values of Kosovo, 2005, Prishtina.
- Ministry of trade and Industry, Country Fact Sheet Kosovo, 2013, Prishtina.
- Newey, W. K., & West, K. (1987). A Simple Positive Semi-Definite Heteroskedasticity and Autocorrelation Consistent Covariance Matrix. *Econometrica*, 55, 703–708.
- Radchenko, S. (2005). Oil Price Volatility and the Asymmetric Response of Gasoline Prices to Oil Price Increases and Decreases. *Energy Economics*, 27, 708-730. http://dx.doi.org/10.1016/j.eneco.2005.06.001
- Radchenko, S., & Shapiro, D. (2011). Anticipated and Unanticipated Effects of Crude Oil Prices and Gasoline Inventory Changes on Gasoline Prices. *Energy Economics*, 33, 758-769. http://dx.doi.org/10.1016/j.eneco.201.01.002
- Ramanathan, R. (1999) Short- and Long-Run Elasticities of Gasoline Demand in India: An Empirical Analysis Using Cointegration Techniques. Energy Economics, 21, 321-330. http://dx.doi.org/10.1016/S0140-9883(99)00011-0
- Rao, B.B. and Rao, G. (2009) Cointegration and the Demand for Gasoline. Energy Policy, 37, 3978-3983. http://dx.doi.org/10.1016/j.enpol.2009.04.046
- Sa'ad, S. (2009) An Empirical Analysis of Petroleum Demand for Indonesia: An Application of the Cointegration Ap- proach. Energy Policy, 37, 4391-4396. http://dx.doi.org/10.1016/j.enpol.2009.05.058
- Sene, S.O. (2012) Estimating the Demand for Gasoline in Developing Countries: Senegal. Energy Economics, 34, 189-194. http://dx.doi.org/10.1016/j.eneco.2011.04.014.
- Tappata, M. (2009). Rockets and Feathers: Understanding Asymmetric Pricing. RAND Journal of Economics, 40, 673-687. http://dx.doi.org/10.1111/j.1756-2171.2009.00084.x
- Taylor, B.N. and Thompson, A. (2008) The International System of Units (IS), National Institute of Standards and Technology. US Department of Commerce, 37.
- Verlinda, J. A. (2008). Do Rockets Rise Faster and Feathers Fall Slower in an Atmosphere of Local Market Power? Evidence from the Retail Gasoline Market. *The Journal of Industrial Economics*, 56, 581-612. http://dx.doi.org/10.1111/j.1467-6451.2008.00351.x
- Wadud, Z., Graham, D.J. and Noland, R.B. (2009) A Cointegration Analysis of Gasoline Demand in the United States. Applied Economics, 41, 3327-3336. http://dx.doi.org/10.1080/00036840701477306
- Wu, J. H., Huang, Y. L., & Liu, C. C. (2011). Effect of Floating Price Policy: An Application of System Dynamics on Oil Market after Liberalization. *Energy Policy*, 39, 4235-4252. http://dx.doi.org/10.1016/j.enpol.2011.04.039