A Case for Continued Pursuit of EMU Accession in Lithuania

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Excessive budget deficits, changes in debt to GDP ratios, high unemployment and uncertainty about currency union longevity, across the EU, are sure to have Lithuanian policy makers questioning any continued implementation of austere programs, or heightened pursuit of Maastricht Criteria. An accurate forecast of gains to trade from Euro zone accession seems in order. The literature seeking to isolate a "Rose effect,"[1] however, is a pointed reminder that, if such accuracies exist, they are highly case specific and ever elusive. Yet critiques and examples of Rose effect applications are sources of country specific currency union particulars. This paper examines the case for Lithuania (LT), through the "Rose lens," as it were, and concludes that, any probability of EMU collapse aside, continued pursuit of Euro zone admittance is in Lithuania's best interest.

The mishandling of the pass-through equation in Rose (2000) led to a severely upward omitted variable bias. Baldwin (2006) suggests including a Relative-Prices-Matter (RPM)[2] term corrects for correlation between error and trade cost terms in gravity model regressions. The need for a relative-terms-of-trade dummy highlights the issue of trade diversion versus trade creation. Will joining the EMU raise Lithuania's cost of trade with the Rest-Of-World (ROW)? Two parts to an answer include changes in export and import prices and economies of scale in trade flows.

Export and import prices are frequently functions of exchange rates and tariff levels. Since 2002, the Litas has been pegged by currency board to the Euro. Since the 2004 EU 5 expansion, Lithuania has applied external EU tariffs. Unless adopting the Euro raises export prices significantly, trade volume fluctuations caused by exchange rate uncertainty would change little. Ercolani (2009) compares non-Euro country inflation rates to Euro converting country inflation rates during conversion to the Euro. His results reveal France, Germany, Greece, Spain and the Netherlands experienced inflation rate spikes during Euro conversion. Surti (2008) gives evidence that prices, in Slovenia, were re-indexed upward by 0.05 to 0.1

1 Andre K. Rose (2000) introduced a currency union dummy into gravity model regression techniques to conclude currency unions create 300% more trade. The following debates were lively enough that Baldwin (2006) coins trade gains from Euro accession as the "Rose effect"

2 Multilateral trade resistance term explaining the effect of a country's ratio of bilateral trade openness to multilateral trade openness on trade values or volumes

percent, during Slovenia's change-over to the Euro. Both researchers report price increases were primarily in non-tradable goods sectors. In the tradable sectors, it seems more likely the counter argument, a key point in Baldwin's critique on Rose, would apply: that reduced transaction costs cause re-equilibration in Cournot collusion settings, lowering tradable sector prices.[3]

Standard trade diversion theory sides with demand, implying increased intra-EMU demand for exports would see prices rise to ROW. Lithuanian trade data, across 2004 to 2010, suggests this Euro change-over inflation[4] would be unlikely to affect trade flows. Across this time period trade-flows were remarkably consistent.[5] A second argument, as we will see below, suggests Euro conversion actually inspires more trade with ROW. A final argument, relevant to countries seeking accession with currencies not pegged to the Euro, suggests EMU challenges are likely to lead to Euro devaluation, inspiring greater trade with ROW.

The second answer to the trade diversion question is a geographical certainty. Klaipeda is a point of entry and exit for no small amount of goods. Melyantsou and Kazakevich (2006) quote Belorussian President Alexander Lukashenko, "30 percent of Lithuania's national budget is formed thanks to shipment of our goods and cargos at their ports." Though the associated footnote estimates this number in terms of profit, at 0.5% of Lithuanian 2005 budget revenue, 30 percent of a national budget is still a significant amount of gross trade activity. Adding Russia's and Poland's use of the port and the argument is that economies of scale in trade flows will keep trade costs with Lithuania's major trading partners low[6].

When Baldwin (2006) suggests on Berger and Nitsch (2005) that they next incorporate estimations for bilateral pass-through-elasticities, as proxies for pair-specific trade integrations, he is implying that more tightly integrated nations have higher pass-through ratios. In the Lithuanian case, close integration with neighbours, all of whom constitute ROW relative to EMU, would reduce the Rose effect, as intra-EMU trade costs would be reduced by

3 Baldwin 2006 supposes that lower trade costs can inspire producers to break collusion patterns increasing competition.

4 To distinguish from Lithuania's standard inflation, which would presumably be within 1.5% of the average of EMU inflation rates, at conversion to Euro

5 Excluding trade flows between LT and Russia which seem to grow persistently. See appendix.

6 Goods already moving through LT in large volumes would ensure opportunities to transport goods to and from LT at discounted costs

less relative to trade costs with major ROW trading partners.

Bilateral pass-through-inelasticities are only part of the east west integration story. Baldwin (2006) cites Flam and Nordstrom (2003) as his favoured gravity model exercise. Flam and Nordstrom (2003) control for the RPM term, the time varying deflation of nominal trade values and model miss-specifications[7]. Surprisingly, they find a Rose effect that equals an EU effect, at approximately 8%. Also puzzling, they find that non-EU nations exporting to EMU nations have the same Rose affect as intra-EMU trading nations. The conclusion is that the Euro liberalizes trade unilaterally rather than preferentially, suggesting EMU countries are more attractive to non-EMU exporters. Across 2004 to 2010 more than 70% of Lithuania's imports came from non-EMU exporters. Two thirds of those consistently came from bordering countries, with Russia exporting the lion's share. The intuition is that, rather than lowering trade to ROW, EMU accession would increase both ROW and intra-EMU trade.

Flam and Nordstrom (2003)[8] also isolate Rose effects by sector. Their analysis concludes that Standard International Trade Classifications (SITC) 1, 6 and 7 have the highest and most significant Rose effect coefficients[9]. The largest coefficient is the SITC 1, food and beverage, which seems typically overestimated at .352 (suggesting joining the Euro increases food and beverage trade by 142%). If converting to the Euro were to increase tourism, which it may well do, especially if Latvia, Sweden and/or Poland also convert, this high number might make more sense. Incidentally, Dalia Bernatonyte (2010) conducts a trade specialization exercise, combining a Balassa index[10] with a relative import advantage index, in logarithmic form, to form a Revealed Comparative Advantage (RCA) index. Her findings report that Lithuania has RCA in trade with EU in: food, drink and tobacco, raw materials and other manufactured goods. These correspond to SITC 0, 1,2,4,6 and 8, implying an RCA in two of the three sectors that have the highest and most significant responses to gravity model currency union trade gain predictions.

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7 They select European control groups for difference-in-difference regressions, reducing miss-specification

8 This from Baldwin (2006)

9 SITC 1: food and beverage, SITC 6: other manufacture goods, SITC 7: machinery and equipment. All are significant to the 1% level, with data ranging from 1995-2002, for EMU 11 [see Baldwin (2006).] At EMU 27, food and beverage drops to 0.161 or 117% and remains significant to 10% level.

10 Ratio of i's exports of j to i's total exports relative to ratio of world exports of j to total world exports.

An additional gravity model application consists of comparing actual trade flows to predicted ones, with the intention of classifying countries as under-traded or over-traded. Nwabuzor and Nwakanma (2007) apply this technique to new EU members across 2004 to 2007. They employ "post Rose-Van Wincoop" techniques to account for various omitted variable biases and time and country varying effects. They conclude Lithuania's actual exports to EU-15 were approximately 20% higher than predicted, on account of over-trading to the U.K. They hypothesize Lithuania is "under-traded with the other new EU members thus creating potential for exports." Though this hypothesis supports an argument for continued pursuit of Maastricht Criteria (presuming EMU inclusion will increase trade with 5th enlargement countries), it is still subject to Baldwin's (2006) critique of EU data.

Baldwin (2006) is suspicious of EU data collection inaccuracy. He associates this with "acquisition and carousel fraud" that allows criminals to receive VAT export reimbursements without paying VAT rates on imports. VAT fraud creates a gap between export and import statistics and can inflate trade statistics. If we suppose a correlation between high corruption countries and inflated statistics, we would like to estimate corruption levels before considering the policy implications of Nwabuzor's and Nwakanma's (2007) hypothesis. Raimundas Urbonas (2009) notes Lithuania scores 26th of 29 European nations on the Corruption Perceptions Index (TI CPI). By this index, only Romania, Bulgaria and Poland have more corruption and even Italy is less corrupt. Corruption is high enough that simply converting to the more liquid Euro could raise informal trade volumes. Corruption levels and over reporting of EU statistics suggest Lithuania may have greater trade potential than measured by Nwabuzor and Nwakanma (2007).

A further critique in Baldwin (2006) suggests Rose (2000) erred when he took the log of the sums of trade flows and not the sum of the logs. His point is that relative size of trade-flows matter. Small open economies gain more from currency unions than large closed ones. By GDP 2010, Lithuania is 1% the size of Germany, the EU's largest economy, by population 4%[11]. The World Trade Organization records Lithuania's 2007-2009 trade to GDP ratio at 121.7

11 UN—Department of Economics and Social Affairs numbers

(a measure of openness). By currency union trade gains relative to GDP, Lithuania stands to gain more than any OECD country. The same economies-of-scale argument applies to actual money supply minting and maintenance.[12] Economy of scale gains from transferring money supply maintenance to the supranational level relative to the costs of the same will be large.

The evidence in favour of continued pursuit of EMU entry is large. Yet counter arguments deserve some attention. Standard arguments against currency union theory include lack of independent monetary policy, loss of exchange rate devaluation adjustment mechanisms and losses from trade diversion. In the Lithuanian case, independent monetary policy has been given up in favour of a currency board arrangement. The same arrangement sacrifices the exchange rate adjustment mechanism. The historical, cultural and geographic nature of roughly 50% of the Lithuanian trade-flows, suggest the presence of pass-through in-elasticities.

It follows the task is one of finding downsides rather than upsides. One potential downside, higher interest rates on debt, is more relevant to the Poland case, where debt-to-GDP ratios are much higher (though it is still noteworthy). Other downsides include increased corruption[13] and risk of EMU collapse. Both of these costs seem slight when compared to potential trade gains and transaction cost savings.

In closing, Baldwin (2006) suggested trade economists, seeking Rose effects, ask the question of "how?" rather than "of how much?" This paper has heeded his advice and examined the potential gains to Lithuania from EMU accession, using the gravity model debates as a guideline. The results indicate Lithuania stands to gain in trade with ROW and with the EMU on completion of change-over to the Euro. Moreover, trade specialization and the potential of under-trading, promise further gains from Euro accession. Economies of scale ensure that gains from trade and currency management cost reductions will be large relative to GDP. However, corruption could impose ambiguity on Euro accession trade gains. If replacing the Litas with the Euro increases corruption, the effects on FDI and tourism revenues could be negative. On the other hand, an increase in corruption could entail an

12 Incidentally, LT suffers from its own "small change problem," having impractically valued 1ct, 5ct, 10ct and 20ct coins.

13 Assuming correlation between corruption and liquidity of currency

increase in the velocity of money and an associated increase in informal GDP.

The policy implications of "how" Euro accession will affect Lithuania are clear: continued pursuit of Maastricht Criteria is in order. Ramūnas Vilpišauskas[14](2010), notes that all the three of the Baltic countries reduced budget expenditures and increased taxes at the beginning of the 2008 downturn. He also points out, across 2008 to 2010, wages declined by 8.7%. Statistics LT reports a debt to GDP ratio, at 2010 year end, of 38%, little more than half of the EU average. On the other hand, in 2009, of EU members, only Romania had a higher inflation rate (Lithuania's averaged 4.2%).[15] Also, Lithuania's 2010 18.3% unemployment rate tied Latvia's for the second highest unemployment in the EU (next to Spain's). Even its relatively reasonable 2009 9% budget deficit was 3 times larger than Germany's. This paper provides significant evidence that continued pursuit of EMU entry is in Lithuania's best interest, but such pursuit will need to continue for some years before admittance to the EMU is assured.

14 Former LT Presidential economic adviser

15 These numbers and those following: United Nations Department of Economics and Social Affairs, Statistics Division

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Appendix:

Percent Trade Share Exports Lithuania

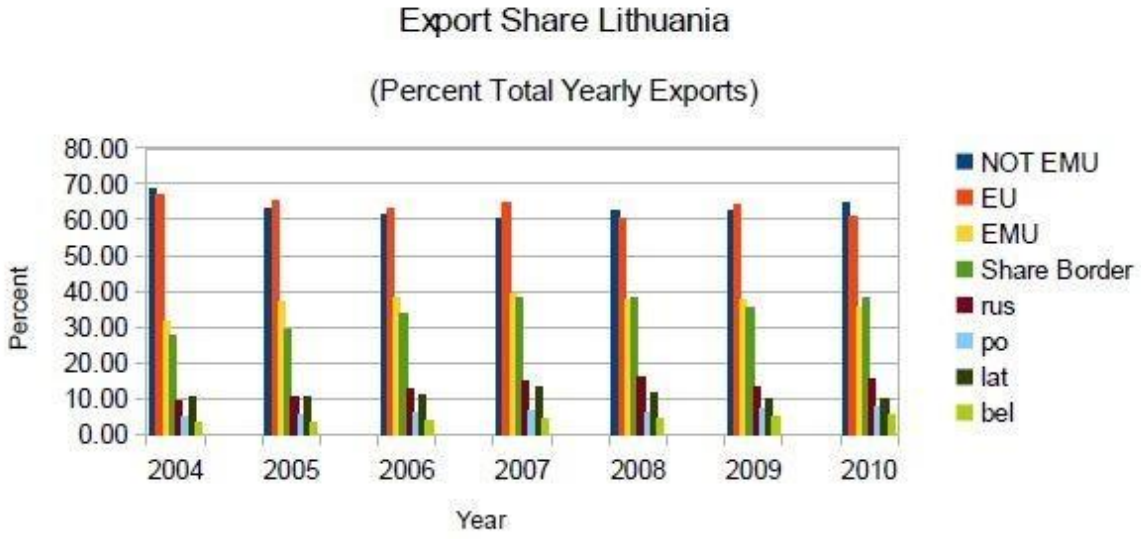
Year	2004	2005	2006	2007	2008	2009	2010
Not EMU	68.55	63.01	61.70	60.52	62.60	62.44	64.77
EU	66.89	65.37	63.23	64.75	60.30	64.28	61.08
EMU	31.45	36.99	38.30	39.48	37.40	37.56	35.23
Share Border	27.47	29.48	33.67	38.16	37.94	35.21	38.07
Russia	9.28	10.44	12.74	14.99	16.06	13.24	15.59
Poland	4.82	5.53	6.07	6.28	5.78	7.19	7.69
Latvia	10.19	10.26	11.07	12.88	11.61	10.06	9.56
Belarus	3.19	3.24	3.79	4.01	4.50	4.72	5.23
Sweden	na	4.98	4.50	3.80	3.40	3.62	3.56
U.K.	5.32	4.71	4.41	4.56	4.63	4.39	4.90
Denmark	4.76	4.33	4.20	4.05	4.68	3.81	2.99

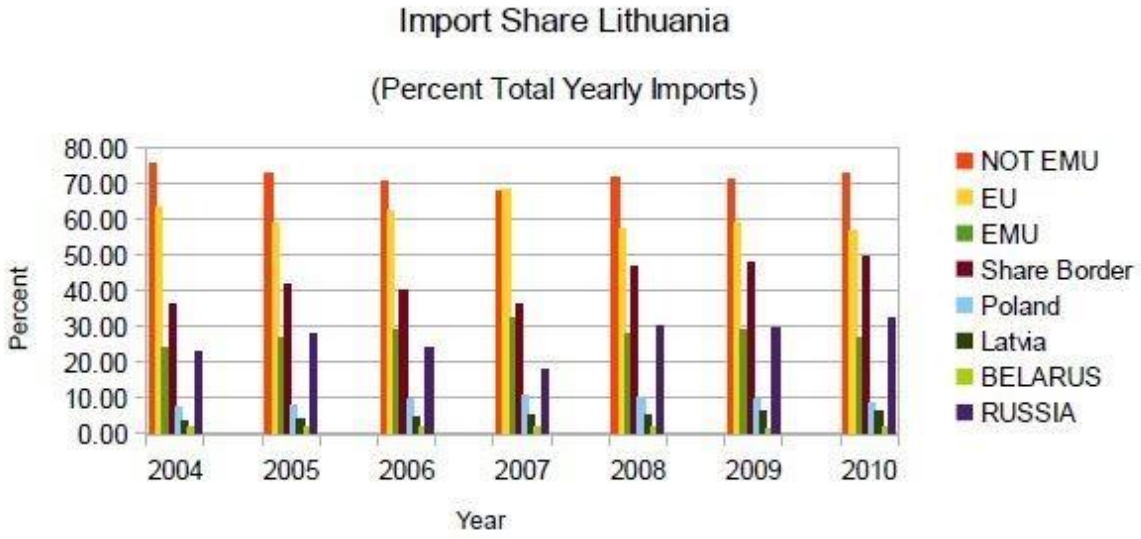
Statistics Lithuania

Percent Trade Share Exports Lithuania

Year	2004	2005	2006	2007	2008	2009	2010
NOT EMU	75.72	73.16	70.67	67.76	71.92	71.18	72.88
EU	63.28	59.29	62.57	68.34	57.55	59.09	56.58
EMU	24.28	26.84	29.33	32.24	28.08	28.82	27.12
Share Border	36.42	41.84	40.42	36.10	46.84	47.91	49.42
Poland	7.65	8.31	9.52	10.62	9.99	9.97	8.84
Latvia	3.84	3.96	4.77	5.47	5.21	6.41	6.26
Belarus	1.95	1.75	1.77	1.98	1.71	1.65	1.70
Russia	22.99	27.82	24.36	18.02	29.94	29.88	32.62
Sweden	na	3.43	3.34	3.74	2.97	2.71	3.26
U.K.	2.35	2.21	2.66	2.82	1.88	1.65	1.58
Denmark	3.60	3.01	2.88	2.74	2.14	2.22	1.70

Statistics Lithuania


Export Share Lithuania
(Percent Total Yearly Exports)
Percent
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2004
2005
2006
2007
2008
2009
2010
Year
NOT EMU
EU
EMU
Share Border
rus
po
lat
bel


Import Share Lithuania
(Percent Total Yearly Imports)
Percent
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2004
2005
2006
2007
2008
2009
2010
Year
NOT EMU
EU
EMU
Share Border
Poland
Latvia
BELARUS
RUSSIA