

# ***Lending and Growth in Central and Eastern Europe and the Baltic States***

**Kristin K. Howell**

University of North Carolina at Wilmington

## **1. Introduction**

A number of countries in central Europe and the Baltics have applied for membership in the European Union (EU). They are each unique and many difficult economic and political questions remain. Hungary and Poland are among those that are still in transition from centrally-planned economies, but are the most economically advanced of the applicants (along with the Czech Republic and Slovenia). Admission of these countries would no doubt benefit the European Union economically and politically. Romania is in a more uncertain situation politically (as well as Slovakia and Bulgaria) and lags economically. Its GNP and exports fell drastically after 1989 and are only gradually beginning to recover. Inflation, devaluations, and the slowest pace of privatization are other problems.

The Baltic States, Estonia, Latvia, and Lithuania, are also a matter of some concern to the Union, particularly their relations with Russia. Cyprus and Malta are both small, open economies with strategic locations and the only membership problems are posed by the lower incomes of the Turkish section of Cyprus and the political tensions the division creates, especially with Greece.

Despite their uniqueness politically, all of these applicants have a fairly low per capital income level, a high percentage of labour in agriculture, and primitive infrastructure. They have also borrowed heavily from the International Monetary Fund (IMF), the World Bank (WB), bilateral, and private sources (see Table 1 for basic country facts). The applicants will gain economically from membership and the Union

expects to benefit politically, but at the cost of lowering average per capita income.

Turkey, an associate member of the European Economic Community since 1962, has close economic relations with the EU, but is not currently being considered for membership due to serious political and human rights problems. Its many potential emigrants would take advantage of free mobility of labour, especially into Germany, and Greek opposition remains strong.

## 2. The objectives

Future EU success depends in part on continued and expanded access to capital markets, which hinges on existing debt burdens. Official and private loans to EU membership applicants over the years were meant to promote monetary and economic stability and the ability to attract international capital and thus to support smooth flows of trade and finance. Impacts of borrowing from the IMF, the WB, and bilateral and private sources, as well as the effects of other important variables, on real gross national product (GNP) per capita, which reflects stage of development or standard of living, were tested. Results varied, as expected, due to the unique nature of the countries and the use each made of a variety of funds and policies. Membership of each will affect the EU differently, which is of interest to policy makers.

<b>TABLE 1. Basic Country Facts - 1997</b>										
	Hungary		Poland		Czech R.		Estonia		Slovenia	
	1999	1997	1999	1997	1999	1997	1999	1997	1999	1997
HDI RANK *	36	47	38	44	33	36	44	54	29	33
GNP per cap. (US \$)	11,430	2,372	8,450	1,926	13,018	3,329	8,355	2,984	15,977	4,350
DEBT SERVICE RATIO **	26.6	29.7	20.4	6.1	10.3	14.1	13.2	1.4	5.8	3.9
UNEMPLOYMENT RATE	7.1	8.7	13.9	11.5	8.8	4.7	12.3	10.0	9.2	7.1
EXPORTS (% OF GDP)	53.0	45.0	26.0	26.0	64.0	58.0	77.0	77.0	53.0	57.0
NET FDI (mil. OF \$)***	4		4.7		9.6		5.8		.9	
* U.N. Human Development Index (HDI) rank out of 174 countries - all improvements over previous years ** DEBT SERVICE RATIO (debt service as % of exports of goods and services) *** Foreign Direct Investment										
Sources: U.N. Human Development Report 2001.										

### **3. Literature review**

Given the recent expansion of the European Union to include Austria, Finland, and Sweden and the current stage in the EU's integration process towards monetary union and a single currency, much has been written concerning further expansions. A number of central European countries and Baltic countries appear to be in line for membership in the near future, pending resolution of a variety of economic and political problems (Neal and Barbezat, 1998). Others may never wish to or be able to join (Turkey). Some authors question whether there are any real prospects of integrating any of these countries into the EU, due to potential negative effects on the EU's growth performance (Landesmann and Poschl, 1995).

EU entry is likely to reduce the perceived risk of investment and increase capital inflows for the "poorer" eastern countries, while reducing EU average income (Baldwin, Francois, Portes, 1997). In some cases the link between growth and multilateral and bilateral aid (with appropriate conditionality) is discussed as exerting a positive effect on liberalization, stability, and growth and, thus, foreign direct investment (Shamsuddin, 1994). Adherence to IMF programmes often opens the door for economies in need of other private and public loans (Fischer, 1997). Beyond this though, a lower debt service ratio is found to be important for access to capital markets through confidence and, ultimately, towards EU "success."

In order to predict the ability of the central and eastern European countries to enter and benefit the EU, a number of important variables are usually considered, including fiscal deficits (Mussa, 1997), privatization efforts, inflation rates (CPI), economic growth, political stability, export volume, debt ratios (Luthans, Patrick, Luthans, 1995), exchange rates, and interest rates. Per capital GNP is a commonly used measure of economic well-being. Exchange rates, a key influence on many aspects of the economy, are often devalued during adjustment programmes in order to obtain loans if they were previously over-valued. This should make exports cheaper, although imports become more expensive and may worsen inflation. Interest rates reflect the accessibility to funds within the nation

and the degree of confidence of the financial markets. Lower rates are expected to stimulate economic activity. Some of these variables are studied in this paper for a sampling of those countries that are in line to join the EU.

The Human Development Index (HDI) (Table 1), developed by the United Nations, measures the level of poverty of nations, or economic well-being. It includes real growth (per capita income), education, and longevity and is an additional variable to be considered when making judgments about a country's prospects as an EU member.

#### **4. The lenders**

Multilateral, or official (IMF and WB), lending is usually based on conditionality agreements with respect to "credible" reform programmes to reduce domestic inflation, the government's budget, and balance of payments deficits. "Appropriate" exchange-rate values, trade policies, money supply growth, and interest rates are encouraged in order to achieve economic growth and a sustainable payments position. The conditionality is often criticized as being inflexible, difficult to enforce, too standardized, and creating undue hardships for a variety of debtors.

Bilateral lending occurs between two governments, but often through aid agencies. One of the largest donor groups is the Organization for Economic Cooperation and Development (OECD). These loans are usually concessional and target specific, short-term projects and food aid. They typically reflect the donor government's foreign policies and are therefore frequently criticized for having political motivations, such as encouraging specific markets, colonial ties, or having diplomatic or military aims. Lending may even be tied to the purchase of the lender's exports or inputs for projects. Governments also often do not have any policy of withdrawing financial support if domestic reforms are not met.

Private commercial bank lending and credits are usually of the nonconcessional type, with no related domestic economic restructuring programmes and stricter terms.

## 5. The model

All of the potential EU members mentioned in the introduction were studied for this paper, but only Hungary, Poland, Romania, Malta, and Turkey were tested (1980-1995) due to the absence of consistent data for all countries. These countries represent a sampling of the various stages of membership application and the possible effects on EU success. Real GNP per capita was chosen as the dependent variable because it is widely regarded as an economic indicator of growth potential and standard of living, given "appropriate" domestic policies. The independent variables included lending by the IMF, WB, bilateral and private sources, exports, the exchange rate, the interest rate, the CPI, population, and the total debt service to exports ratio.

All debt represents external obligations of the public debtor or private debt that is guaranteed by the public entity. It is in the form of millions of dollar flows or disbursements, or the amount of aid a country received in a given year. IMF credit represents repurchase obligations with respect to all uses of IMF resources, excluding those resulting from reserve tranche drawings. Bilateral lending represents loans from governments, including from central banks and direct loans from official export credit agencies. Debt from private creditors includes bonds and commercial bank lending, as well as credits from manufacturers, exporters, and other suppliers of goods. All data used was from *The World Bank Debt Tables* and *IMF International Financial Statistics*.

The coefficients in the following equation were originally estimated for each country using Time Series Processor (TSP) for ordinary least squares (OLS) regression analysis:

$$\text{RGPC}_t = \beta_0 + \beta_1 \text{IMF}_{t-1} + \beta_2 \text{WB}_{t-1} + \beta_3 \text{BILAT}_{t-1} + \beta_4 \text{PRIV}_{t-1} + \beta_5 \text{XGS}_{t-1} + \beta_6 \text{ER} + \beta_7 \text{INT} + \beta_8 \text{CPI} + \beta_9 \text{POP} + \beta_{10} \text{TDS} + \varepsilon_t$$

where RGPC = real GNP per capita, IMF = IMF lending, WB = World Bank lending, BILAT = bilateral lending, PRIV = private lending, XGS = annual export volume in millions of dollars (all in real terms), ER = the exchange rate (foreign currency per dollar/period average), INT = annual

demand deposit interest rate, CPI = consumer price index, period average, POP = mid-year population estimate in millions, TDS = total debt service to exports ratio (debt service ratio), and  $\epsilon$  = randomly distributed white noise error term.

Lending variables were initially lagged one year because IMF and WB agreements usually take at least a year to negotiate, implement, and exhibit results, while other variables may impact on the economy more quickly.

The null hypothesis is that there is no significant relationship between the different flows of lending, the other domestic variables, and real GNP per capita. It was expected that various forms of lending, coupled with "appropriate" conditionality and domestic reforms would, over an intermediate time period (one to three years), promote economic strength.

A test for autocorrelation properties (error terms not randomly distributed) revealed a nonstationarity problem and the need for first differencing of the dependent variable. These results indicated autoregressive components in the series and, thus, the need for AR terms in the least squares equation to account for the autocorrelation (correct for serial correlation of disturbances) found in the models and to provide efficient estimates. First differencing is also a method for dealing with multicollinearity (explanatory variables related).

## **6. Results**

The regression results (with computed t-statistics in parentheses below the estimated coefficients and the number of lags for each variable in parentheses beside the estimate) are presented in Table 2. The calculated Durbin Watson statistic was compared to the Durbin's h statistic (required when any form of the dependent variable (AR) is used as an independent) and was found to be nonsignificant at the .05 level, reflecting freedom of the residuals from first order serial correlation.

IMF lending had a significant and positive effect on real GNP per capita in all countries except Malta (no loans) and Cyprus (loans only from 1980 through 1984). These two nations have high HDI, an

indicator of a lower poverty level. Apparently, during this test period (1980-1995), the countries positively affected were able to take advantage of IMF funds and adjustment programmes within a very short time and improve their stages of development. Possibly, the depreciations forced by conditionality also promoted exports and GNP growth. Much of the literature has found a positive link between IMF stabilization programmes and the balance of payments through export expansion (Harrigan).

**TABLE 2. OLS REGRESSION RESULTS**  
(dependent variable: real GNP per capita) 1980-1995

Var.	Hungary	Poland	Romania	Malta	Cyprus	Turkey
CONST	1622.28 (2.71)	NA	NA	NA	NA	NA
IMF	1.09(-1) (6.67)***	1.10(-1) (3.78)***	0.01(-1) (1.99)**	NL	-109.02(-1) (-4.28)***	1.34(-2) (3.40)***
WB	-4.84(-1) (-3.89)***	-0.98(-1) (-0.75)	0.005(-1) (2.11)*	NL	NL	0.56(-2) (-2.05)*
BILAT	-2.14(-1) (-3.85)***	-0.02(-2) (-2.86)**	NA	24.19(-1) (2.95)**	NL	-0.56(-2) (-6.04)***
PRIV	0.13(-1) (2.58)*	0.15(-1) (8.34)***	-0.004(-1) (-1.96)*	415.70(-1) (0.93)	NL	NA
XGS	-0.02(-1) (0.37)	-0.07(-1) (-9.26)***	0.002(-1) (4.83)***	-0.69(-1) (-4.55)***	-2.43(-1) (-6.55)***	0.10(-1) (1.06)
ER	-.63 (-3.40)**	0.001 (6.38)***	0.05 (2.54)**	-60.98 (-3.67)***	-157.36 (-7.00)***	-0.0004(-1) (-1.25)
INT	0.12 (1.34)	-0.22 (-2.88)**	ND	-9.62 (-2.03)*	NA	0.80(-1) (3.63)***
CPI	NA	-0.05 (-1.54)	0.01 (-2.59)**	0.40 (2.36)**	0.05 (0.26)	NA
POP	-147.80 (-2.63)*	NA	-0.99 (-5.82)***	NA	192.60 (5.35)***	NA
TDS/X	NA	ND	NA	9.31 (2.32)*	ND (-2.30)*	-1.07(-1)
AR	0.07 AR(2)	-0.60 AR(2)	0.46 AR(1)	-0.83 AR(1)	AR(1) 0.09	1.23, -0.31 MA(7) -0.95 AR(1), AR(2)
R2	.84	.96	.70	.90	.84	.85
F	8.21	31.94	5.32	7.35	12.72	8.54

t statistics:  
 \*\*\* = significant at 1%  
 \*\* = significant at 5%  
 \* = significant at 10%  
 NA = nonsignificant variable  
 ND = no data available  
 NL = no loans

WB lending showed mixed results, with positive impacts in Romania and Turkey (Malta received no loans and consistent data was not found for Cyprus) and negative results in Hungary and Poland (no loans until 1990). Romania and Turkey exhibited the lowest HDI of the group, possibly reflecting the greatest potential to benefit from WB programmes. The WB focus is usually on structural reforms and on reducing an inward orientation on trade. Positive results may reflect that the resources were used efficiently in terms of amounts, timing, and for the "appropriate" development projects given the country's stage of development, while negative results suggest too "harsh" conditionally or negative spillover effects.

Bilateral lending reflected mostly negative effects on real GNP per capita during the first year (Hungary, Poland, Turkey). These results support criticisms of bilateral loans as lacking any enforcement of domestic reforms and for having political motivations. The positive results for Malta may have been due to the relatively small volume of the funds needed, domestic stability, low debt, and open trading policies already in existence (high HDI).

Private sources of credit proved to have positive effects in all countries except Romania (large decline in volume of loans from 1989), Cyprus (no data), and Turkey (nonsignificant). Negative impacts may indicate inadequate amounts of funds, large debt ratios, and appreciation pressures of increasing inflows of foreign investment on the currency value. Nonsignificance may again be due to the inefficient direction of the loans into areas other than export promotion and the overregulation by the government of the private sector. The relatively low HDI of Romania and Turkey suggests inability to use funds appropriately.

Other variables showed mixed results depending on the level of development and domestic economic and political policies.

## **7. Conclusion**

It may be concluded that development financing through the IMF, the WB, and bilateral and private sources of funds has played a role in affecting the growth potential of these central and eastern European

countries where there was consistent lending over the test period. IMF lending produced positive results while the other lenders reflected mixed effects on real GNP per capita, an important criteria of the success of aid and an indicator of the stage of development and standard of living. Other explanatory variables also yielded mixed, and often surprising, results, probably due to the extremely divergent economic and political conditions in the countries. The effects of exports on growth, for example, may depend on a critical minimum development level.

It is therefore not possible, as usual, to conclude that all aid contributes positively to growth. Development impacts of loans and adjustment depend on socio-economic structure and the nature of the stabilization programme. The recipient government must be willing and able to put the funds to efficient use and overcome resentment towards foreign direct investment, which slows privatization (Sinn and Weichenrieder). Varying maturities, timing of disbursements, realistic exchange rates, and types of exports also play a role. It must also be kept in mind that real GNP per capita alone is not an adequate predictor of the country's progress and success potential as an EU member.

In general though, the Central and Eastern European countries have shown dynamic progress with potential for continued growth. Membership in the EU should prove beneficial to these nations by reducing investment risks and raising real incomes. Much of their progress so far has been driven by the prospect of joining and, thus, the need to adhere to the EU's requirements. However, criteria for joining the European Union, the European Monetary Union, and thus, for participating in the Euro, have been objective and strict. These criteria most recently included budget deficits not to exceed 3% of GDP and government debt of about 60% of GDP or declining. Additionally, inflation rates, long-term interest rates, and exchange rates were to be held to specific maximums or margins. The government deficits of Hungary and Poland remain quite high, as does the debt for these countries (and Romania). Inflation also continues to plague several of the countries hoping to join the EU. However, it seems that integrating into the EU will benefit both sides, given the necessary adjustments.

It is important to continue efforts to cooperate internationally to

achieve long-term reforms, such as those related to open-trade policies, export development, debt service reduction, and increased flows of technological know-how. Improved financial market access and consistent private investment growth, often linked to multilateral loans, are important for successful transitions to market economies. Success in these areas should be reflected in the growth indicator, real GNP per capita, and foreshadow the possibility of benefits to the EU of membership. Decisions of policy makers and official and private lenders that result in efficient and humane use of funds depend on understanding these effects.

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