FDI in Hungary and Slovakia : The Experience of Smaller EU Economies

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INTRODUCTION

In the global economy, FDI has grown rapidly in recent years as financial markets became increasingly integrated and policy and political barriers everywhere were at least partially dismantled. Economic liberalization in all geographic regions attracted new inflows of FDI and potential host economies welcomed and competed aggressively for FDI. Global inflows in 1992 were only 166 billion dollars but twenty years later reached approximately 1.33 trillion dollars. In 2013, annual FDI inflows were 1.45 trillion , accelerating again despite evidence of a slowing global economy. FDI flows into the E U during the period of this study, 1993 to 2013, were somewhat volatile given the changing regional economic environment, the enlargement of the EU in 2004, and the global financial crisis of 2008. From 1993 through 2000, inflows grew each year, peaking at 703 billion dollars in 2000, and then declining annually until 2005. With the enlargement of the EU to 25 countries in 2004 and favorable regional and global economic conditions, FDI reached $864 billion in 2007. However, the global financial crisis and growing economic slowdown within the EU, especially the Eurozone, led to annual inflows falling to $246 billion in 2013. Overall, global FDI inflows peaked at 2 trillion dollars in 2007 and have averaged approximately 1.5 trillion from 2008 through 2013.   (UNCTAD, 2014).

Economic restructuring and growth in the major recipient and investing countries, more efficient global capital markets, and continued economic transition and political stability in emerging economies strongly influenced investor behavior and strategy. In summary, the acceleration of FDI has been fueled by the increasing globalization by transnational organizations of their production networks, the policy liberalization of host countries regarding FDI in most sectors, growth in cross-border mergers and acquisitions, and the expanding investment opportunities in regionally integrated markets and newly privatized sectors in both advanced and developing economies.

The economic and financial crisis, which developed in 2008, did have an immediate negative impact on 2008 and 2009 foreign direct investment inflows, however annual global FDI inflows recovered quickly in 2010. The global pattern of FDI throughout the period of this study has been dominated by the developed economies and OECD countries. The developed economies led by the "triad" of the U.S. Japan, and the European Union accounted for approximately 65% of FDI inflows in 2007. In 2008, record inflows of FDI into developing nations were reported ($630 billion) but the "triad" still dominated both as a home and host nations of new FDI. However, by 2013, the developed economies share of global FDI inflows had fallen to about 40%. The E U as a region was the largest recipient of FDI inflows during the period of this study with the United States and more recently China being the largest country recipients of FDI. The allocation of FDI by foreign investors strongly favored the larger E U members, particularly the U K, Germany and France. However, since the EU enlargement
in 2004 and 2007, with 12 new member countries, the relative share of FDI inflows in these three countries has fallen as the relative share of the "new Europe" accession countries has increased.

This paper examines the patterns and the economic determinants of FDI in Hungary and Slovakia for the period 1993 to 2012, during their transition to market driven economies and their accession to the

E U in 2004. The period begins with the independence of Slovakia as a result of the peaceful division of Czechoslovakia in 1993 and encompasses the introduction of the Euro in 2009, the first year of the E U enlargement 2004, and in 2008 and 2009, the peak years of the global financial crisis. Hungary also joined the EU in 2004 but has remained outside the Euro zone. Of course, one cannot assume causality but the raw data confirms some impact on FDI from these unique events. Both countries by population and GDP are among the smaller members of the E U and share a similar history and culture, a peaceful transition from a Communist regime to greater democracy, and a central location in the heart of Europe. Each began the process of political independence from the Soviet Bloc and economic liberalization and transition in 1989. They also share a large border and strong economic ties to both Western and Eastern Europe. However, an important difference is that Hungary has remained outside the Euro zone while Slovakia joined the Euro zone in 2009. Since 2010, the economic and financial crisis in the EU and the general global economic slowdown have had a negative impact on FDI in the entire region. Hungary has been in recession since 2010 and faced both a banking and political crisis. Slovakia has maintained political and banking stability and positive although modest economic growth through these years but has experienced rising unemployment. Past studies of investment in the EU confirm that economic integration into the EU and the Single Market Act had a positive impact on FDI in the larger economies and subsequently in 2004 on the smaller accession countries but also suggest that the introduction of the Euro and the expansion of the Eurozone may have had a more uncertain impact on the share of FDI inflows among the member countries. To more fully analyze and compare the experience of Hungary and Slovakia, this paper applies different FDI models to both countries and suggests some economic and policy implications for similar economies competing for FDI with much larger regional economies.

ECONOMIC AND POLICY ENVIRONMENT

The Slovak and Hungarian economies during the years of this study generally performed well in terms of GDP and growth in trade and national income. Significant economic growth occurred in the period of economic liberalization and trade openness in the nineties during the transitions to a market based economy oriented to Western Europe. Economic transition and growth was accelerated through increased inflows of FDI following the accession of both countries to the EU in 2004, along with other central European and Baltic economies. Full membership for Hungary and Slovakia brought in great amounts of EU institutional capital inflows through access to the structural funds provided by the EU for infrastructure development and educational projects in the public and NGO sectors. Private capital inflows through FDI from Western Europe primarily and from the United States as well increased during the period of this study fueled by economic liberalization and EU membership. There was little impact in both countries from the moderate global economic slowdown in the early nineties and in 2000 but the global crisis of 2008-2009 had a more significant impact on reducing the annual growth rate of GDP and the inflow of FDI. The global financial crisis and the resulting recession which hit many EU countries also created a recessionary environment in Hungary and Slovakia and did generate an extended decline in FDI inflows, with some recovery in 2011. In fact, both country experienced a decline in real GDP and slipped into recession in 2009 but economic growth accelerated and was positive in 2010. Trade flows for the entire period, as measured by export and import values rose each year after EU accession with only a moderate slowdown since 2009. The decision by Slovakia to enter the Eurozone in 2009 and the decision by Hungary to retain the florin and not seek Eurozone membership seems not to have significantly impacted FDI inflows and their regional and sectoral allocation (IMF selected volumes, IFS Yearbooks).

During the period of this study, the economy of Hungary grew significantly until 2007. From 1993 until 2007, real GDP grew at an annual average rate of approximately 4% However in 2007 and 2008, economic growth rates declined to less than 1% and in 2009, as a result of the global and EU financial crisis and slowdown, the economy experienced a severe recession as the growth rate was a negative 6.8%.

Since then, economic growth, has averaged about 1% a year with a moderate recession in 2012 (World Bank Annual Report, 2014). The lingering impact of the economic crisis for Hungary has been exacerbated by more selective and restrictive policies on FDI and a slowed pace of economic liberalization. Domestic economic problems and high budget deficits and public debt, led to more restrictive fiscal policy including tax increases and the new conservative government in 2010 has shifted toward more state regulation and intervention. The result has been mixed messages to foreign firms and investors creating policy uncertainty and an emerging image problem (Vale Columbia Center Report, 2012), although statutory corporate tax rates are regionally competitive at approximately 19%. With a population of 10 million, per capita GDP in purchasing power terms went from 12,500 euro equivalent to 17, 200 in 2013, still lower than the average for all other central European economies.

The data on annual FDI inflows from 1993 through 2013 reflect the economic and policy environment of volatility and uncertainty. Hungary from 1993 to 2008 was one of the leaders in Central Europe in attracting FDI through rapid economic liberalization and privatization, peaking at 7.7 billion dollars in 2005. However, as with other countries in the region, FDI inflows declined significantly to 2 billion dollars in 2009 and 2.3 in 2010 but in 2011 annual FDI recovered to 6.3 billion. Preliminary data estimates annual FDI inflow to be approximately 3.1 billion in 2013 (World Investment Report 2014, UNCTAD). Hungary was the first country in Central Europe to open its economy to FDI but has since lost relative market share of FDI in Central Europe, particularly to the Czech Republic and Poland. In the early years of liberalization, market seeking FDI dominated but since 2000 and particularly after accession to the EU in 2004 efficiency seeking and export oriented FDI has become more important. However a more restrictive regulatory environment may make Hungary a less attractive Central European host for future FDI.

Slovakia's economy and business environment during the period of this study experienced much of the economic volatility and policy uncertainty as other countries in the region, such as Hungary. In 1993, the former Czechoslovakia peacefully transitioned into the independent countries of the Czech Republic and Slovakia. The separation was smooth and relatively painless from a policy and economic perspective. The shared history and strong cultural and economic linkages were sustainable and allowed for domestic and foreign companies to adapt quickly to new policy environments and institutional infrastructures. The newly independent Slovakia had real GDP growth of 6% in 1994 and growth continued at an average rate of approximately 5.5% through 2004, except for slower growth in 1999 and 2000 due to the moderate global recession during those years. With the accession to the European Union, economic growth accelerated in the period 2005 through 2008 with an average annual growth rate of 7.5 %. The global recession and the EU financial crisis severely impacted Slovakia with a deep but short lived recession in 2009. From 2010 through 2013, real GDP grew at an annual rate of about 2.8%. Throughout the period of this study, annual economic growth in Slovakia outperformed Hungary with the exception of 1999 and 2000 (World Bank Annual Report 2014 and National Bank of Slovakia estimates).

Slovakia moved quickly to liberalize its economy and business regulations after independence but comprehensive structural and policy reforms during 2000-2005 really accelerated growth compared to other Central European regional economies. The corporate tax rate fell from 40% in 1999 to 19% in 2004, foreign investment regulations were liberalized, labor laws were loosened and restrictions on starting new business and acquisitions were mostly eliminated. The World Bank named Slovakia as the world's top reformer in liberalizing the investment climate in its publication, "Doing Business in 2005". In addition, the country's favorable low cost and wage environment, its geographic central location and educated labor force attracted significant foreign and domestic investment. Full membership in the European Union and the adoption of the euro in 2009 added greater stimulus to the economy and investment. However, more recently the Business Alliance of Slovakia has reported a negative trend in the general business environment because of increasing bureaucratic procedures and a no -transparent and sometimes ineffective legal system (American Chamber of Commerce in the Slovak Republic, 2013).

FDI inflows from 1993 through 2013 were positive each year, with the exception of the recessionary year of 2009. From 1993 through 1999, annual FDI inflows were approximately 300 million

dollars a year. However, with full economic liberalization and economic growth and membership in the European Union, annual FDI inflows increased quickly and averaged almost 3 billion dollars from 2000 through 2008, a tenfold increase (World Bank UNCTAD, 2014, and IMF, International Financial Statistics, 2013). As with other countries in the region, the global financial crisis and EU slowdown led to negative FDI flows in 2009 but FDI inflows recovered quickly and reached 2.8 billion dollars in 2012. Although in aggregate nominal terms FDI inflows in Hungary have been greater in the last decade, the flow of FDI per capita has been greater in Slovakia which currently has a population of 5.4 million compared to 9.8 million in Hungary.

In discussing the relative economic and FDI performance of Hungary and Slovakia, it is also important to note their rankings in global indices of competitiveness and ease of doing business. In terms of growth in labor productivity and low labor costs, both the OECD and Eurostat rank Slovakia as the leader in 2012 in the Eurozone in the growth index of labor productivity and also the country with the lowest labor cost per hour in the region (OECD, 2013, Eurostat, 2013). In the IMD rankings of world competitiveness, both countries have ranked in the low thirties from 2004, EU accession, to 2008 of the 59 countries analyzed, with Slovakia ranked slightly higher. However, both countries have dropped in the IMD rankings the last few years as a result of both the global financial crisis and the European Union recession from 2009 until the present (IMD World Competitiveness Report, 2012). In the World Economic Forum global competitiveness index, Hungary was ranked slightly higher than Slovakia in 2012, 60th compared to 71st of the 145 countries analyzed (World Economic Forum Global Competitiveness Report 2012-2013). Both countries saw a decline in their rankings for reasons discussed earlier in the IMD report but also because of a more uncertain and re4strictive policy environment. In the World Bank ease of doing business rankings, Slovakia was ranked significantly higher than Hungary in 2014, 37th compared to 54th for Hungary of the 190 countries ranked (World Bank Doing Business in 2014). Lastly, in the Heritage Foundation's Index of Economic Freedom, Slovakia was ranked 35th of 180 countries analyzed while Hungary was ranked 51st (Heritage Foundation Index of Economic Freedom, 2011.

LITERATURE REVIEW

In the extensive literature on FDI, much of the recent research has applied Dunning's (1980) ownership, location and internalization approach (OLI) and examined relative factor endowments (Helpman, 1984), openness to trade (Hejazi and Safarian 1999), comparative advantage and institutional factors (Bush et al., 2003). Other studies of the determinants of FDI have focused on economic conditions, host country policies and MNE strategies and have been well documented (Lall, 1997, UNCTAD, 2009, 2012). Specific FDI determinants in developed economies tend to focus on market size and growth, infrastructure, risk reducing policies, tax rates stability and strength of the currency, and tax incentives. In addition, studies of FDI determinants in emerging markets often include measures of labor costs and labor skills, trade openness and market size factors (Blonigen,2005).

There have been a number of papers focusing on FDI in the European Union. Barrell and Pain (1996 and 1997) developed a theoretical model to analyze U S FDI in Europe and concluded that market size and factor costs are important determinants as well as labor market efficiency and stability. Beer and Cory (1996) , in their empirical study of U S FDI in the European Union, add to traditional factors of market size, labor costs, and trade flows, proxy independent variables for infrastructure and taxes. The authors use gross fixed capital formation and government tax revenues as a percentage of GDP as their proxies. For their sample of 11 E U counties, market size and wage differentials have a significant impact on overall U S FDI but neither of their proxies are validated for specific host countries. Bevan and Estrin (2004) established that country risk, labor costs, host market size, EU accession and gravity factors were significant determinants in attracting overall FDI in Europe. Wolf (2006) examined the effect of taxes on FDI inflows for the enlarged E U and concluded that corporate tax rates controlling for country

characteristics were insignificant for total inward FDI as were wage factors. Foad (2007) analyzed data on U S FDI in seventeen European countries from 1983 to 2004 and validates export market access and Euro membership as factors having an impact on U S FDI during the period. The significance of market size, corporate tax rates and labor cost were confirmed by Torrisi et al (2009a, 2011) who also found privatization to be important in attracting foreign investment into Poland and that E U enlargement and Euro membership were significant positive factors in FDI inflows into Belgium but may have had a negative impact on the United Kingdom (Torrisi, 2014).

Two recent papers have great relevance to this study. In a publication by Sass and Kalotay, the authors analyze FDI inflows to Hungary and the policy context. Although their paper is descriptive rather than empirical, their conclusions confirm much of the empirical academic studies of the determinants of FDI and the impact of the economic environment both internal and external on FDI. The importance of the policy environment and the pace of economic liberalization for foreign investment in transitioning economies is strongly emphasized in their study. Their conclusion that Hungary's investment potential is high but risks are growing in comparison with other EU members in Central Europe because of political, bureaucratic and regulatory issues provides a strong warning to Slovakia (Sass and Kalotay, Inward FDI in Hungary, Vale Center 2012).

In a recent article by Arnold Schuh (Journal of East –West Business, 2012), the author examines the growth strategies of foreign multinationals in Central and Eastern Europe (CEE). In the decades of transition to a market based economy and broad economic liberalization since 1990, he argues that FDI inflows and policy reforms stimulated a quite successful economic recovery and performance, closing the gap with other EU economies. However, the paper asserts that the global financial crisis of 2008-2009 and the ongoing economic slowdown in the European Union severely affected the CEE economies as export markets suffered, capital inflows and domestic investment diminished and national budget deficits and debt increased. National statistics on Hungary and Slovakia as mentioned earlier in this paper do show major economic and FDI decline in 2009 but a fairly rapid recovery beginning in 2010. The author concludes, however, that the original business model and strategy that led to increased FDI by multinational enterprises in the CEE in the period 2000 to 2007 is still essentially valid despite the global and EU financial/economic crisis. Schuh argues ,"Neither the CEE huge market potential nor its favorable cost and resource situation have disappeared…..from the perspective of 2012, the crisis can be seen as a mere interruption of the catching-up process than a genuine systemic crisis" (Schuh, 2012). Multinational enterprise will maintain their entry strategies and commitment to the CEE but will pay more attention to country business risk and the changing policy/political environment is the author's expectation. In this paper, the analysis of the FDI experience of Hungary and Slovakia in the last twenty years strongly supports his conclusion.

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METHODOLOGY AND MODEL SPECIFICATION

The dependent variable in the FDI models estimated for Hungary and Slovakia is annual FDI inflows as reported by UNCTAD (World Investment Report, selected annual editions) . Thus, the measure includes all reinvested earnings as well as new capital inflow and provides a consistent time series of annual FDI. Annual GDP is measured in current dollars and/ or real dollars for the time period analyzed, as specified by UNCTAD and World Bank sources and adjusted for exchange rate variation. Data for additional independent variables examined in our FDI models are primarily from these international sources as well as OECD data banks. For each variable, there exists a consistent time series for the period 1993-2012 as provided by these organizations and agencies.

Recent analysis of FDI determinants in host economies emphasize a variety of macroeconomic indicators. To examine the validity and relevance of these basic models of FDI reported in studies of larger OECD countries, some macro-economic variables that are available in consistent time series from international and/or governmental sources are included in the regression models estimated in this paper,

i.e. market size, market growth, trade openness, statutory tax rates and wage indicies. The importance of these economic factors on FDI inflows in these two smaller transitioning economies during a period of economic liberalization and political/institutional reform, rapid growth in global FDI, full integration into the European Union and continued trade and investment liberalization should be great. However, it was also a period of economic uncertainty, minor recessions followed by a regional and global economic/financial crisis, and increased competition for FDI within the EU and globally.

Of course, less quantifiable and non-economic factors may also have had significant impact on FDI inflows into these countries, such as political stability, institutional efficiency, cultural similarity, and infrastructure proxies but measurement of these qualitative variables is difficult and does not generate a consistent and comparative time series for the period of this study . It is reasonable to assume these non-economic variables would have had some influence on FDI in Hungary and Slovakia during the period of transition to a market economy and economic liberalization. However, in many existing studies of FDI determinants the statistical results are not consistent or robust for these qualitative variables, given data limitations and measurement problems over the specified period. This paper does attempt to explore the impact of two significant events during the period of this study for both these countries, through the use of dummy variables, that may have influenced the political and economic environment for FDI. Obviously, the enlargement of the European Union in 2004, with both Hungary and Slovakia entering along with many of their regional neighbors/competitors, and the entry into the Eurozone with the adoption of the euro by Slovakia and not by Hungary in 2009 might be expected to influence the strategy of foreign investors in their allocation of FDI within Europe and the magnitude of FDI inflows.In the regression models estimated, a number of different specifications for the macroeconomic determinants of FDI inflows were analyzed and dummy variables were included to determine whether there exists a significant once and for all impact of E U accession and adoption of the euro on FDI in these two countries. The results reported in this paper are only for those regression estimates that generated robust regression statistics and identified consistently significant coefficients for many of the independent variables examined.

Market size is measured by annual Gross Domestic Product in dollars and is expected, as confirmed in many empirical studies, to be a significant and positive determinant of FDI. In various estimates, both nominal and/or real GDP in constant 2010 dollars measures were included (World Bank, 2009, 2015). However, export-oriented FDI in smaller economies, domestic market size may be irrelevant. Proximity and more importantly access to regional markets may be driving FDI inflows into smaller economies such as Hungary and Slovakia. Market growth as measured by the annual growth rate of real GDP is also examined, as foreign investors who are market seeking may be more motivated by economic growth experience and potential rather than current economic activity in many emerging economies. If much FDI is efficiency seeking and export-oriented, the attractiveness of a host country to foreign investors should also be strongly influenced by production and labor costs, especially in comparison to regional competitors. Thus, a wage rate index from the National Statistical Offices of Hungary and Slovakia are included in the regressions estimated. During a period of rising wages in the larger EU economies, as was the case in the period of this study, the smaller regional economies with lower labor costs became more competitive in the market for FDI. The theoretical expectation would be that resulting lower labor costs of production would increase FDI inflows into smaller economies. In the empirical literature, there is evidence of a significant negative relationship between measures of labor cost and FDI inflows. However, if FDI inflows are also attracted by domestic demand conditions, market size and cultural and institutional proximity, wage costs may not be a significant determinant of FDI.

Some previous studies of FDI argue that trade "openness" of the host economy may be positively associated with FDI inflows. If much of FDI is export oriented and requires the import of complementary intermediate and capital goods, trade volume increases overall and as a percentage of economic activity. Also, trade openness can be a proxy for successful economic liberalization and favorable trade policies. Thus, a trade openness variable measured as the annual total of exports plus imports is also included in some of our models estimated, with an expected positive and significant coefficient. As an alternative

trade variable influencing FDI, annual exports plus imports as a percentage of GDP was also examined. As in earlier EU studies (Torrisi, 2012, 2014), this paper examines the impact of the introduction of the Euro for Slovakia and of E U enlargement for both countries as represented by dummy variables, the Euro dummy equal to zero from 1993 to 2008 and to one for 2009 to 2012 and an Enlargement dummy equal to 0 from 1993 to 2003 and to one from 2004 to 2012. Academic research and indeed the experience of smaller economies joining the EU suggests that the benefits of accession and membership to regional free trade blocs include increased FDI inflow as access to a growing regional market enhances a country's attractiveness to investors. The expectation is of a positive and significant relationship to FDI in Hungary and Slovakia. Empirical studies of FDI in the literature sometimes attempt to include a variety of risk factors or proxies, both economic and financial. Given the subjective nature of these measures, the inconclusiveness of the results in many of the previous studies, the absence of political and economic risk measures for the time period of this paper and the lack of validation of specific risk variables in past research on FDI , our models estimated do not include specific risk variables.

Although previous studies (Wollf, 2006) suggest that corporate tax rates are insignificant factors for overall FDI across the E U, this paper examines their impact of FDI in Hungary and Slovakia specifically. Much of the academic research on efficiency-oriented and export -oriented FDI in emerging or transitioning smaller economies provide some evidence that corporate statutory tax rates do influence FDI in the regional allocation of inflows. Both countries since their economic liberalization and membership in the EU have significantly reduced their corporate tax rates. Hungary in 1993 had a rate of 40% on corporate profits but by 2004, the year of accession to the EU, the tax rate had fallen to 16%, although the global financial crisis and the resulting EU recession and increased public debt in Hungary led to an increase to 19-20% by 2008 (IMF, 2004, 2012)

. The experience in Slovakia and the changes in statutory corporate tax rates was quite similar. In 1993, the year of independence and separation from the Czech Republic, the corporate tax rate was 45% but by 2004 and EU membership, the tax rate had been reduced to 19% (IMF). The new government in Slovakia in 2012 faced with budget deficits and concerns about meeting Eurozone deficit and debt requirements raised the statutory corporate tax rate to 22%To increase and maintain competitiveness it is evident that both countries adjusted their tax rates similarly to be more attractive to foreign investors regionally, in the EU and as competitors in Central Europe. Other factors which might influence FDI such as existing FDI stock, and infrastructure proxies are not included in this study either due to severe time series data limitations and/or non -quantifiable variables. It is important to note that during the period of this study economic liberalization domestically and economic openness to Western Europe and the world were the dominant factors in the policy environment in both countries since 1993. In future research, it may be possible to measure some of these factors by more extensive data search and the design of comparative regional variables to capture the potential impact of the policy environment on the allocation of FDI inflows in the European Union.

In conclusion, traditional classical models of FDI determinants have been adapted to the unique environment and issues which have possibly impacted FDI inflows to Hungary and Slovakia. During this research, the author specified and estimated a number of FDI models for Hungary and Slovakia, including a variety of macroeconomic variables, that were not constrained by time series data limitations. Using OLS multiple regression and stepwise regression methodology, this paper reports only those models and results that were robust and consistent, produced acceptable regression test statistics, and lead to some interesting and important conclusions regarding FDI in smaller transitioning economies.

EMPIRICAL RESULTS

As mentioned earlier, a large number of models of FDI in Hungary and Slovakia were specified and examined. Two of the most interesting and robust are reported following. Lagging the independent variables did not improve the overall regression results or change the significance of some determinants. As a result, this paper defines the dependent variable as annual FDI in each country from 1993 to 2012,

using UNCTAD and World Bank data. Consistent time series data on current and real GDP is obtained from the same international sources. However, the wage index and trade openness (measured as exports plus imports) variables were determined from a variety of sources including the national statistical offices and central banks of Hungary and Slovakia. At all times, utilizing the most consistent set of time series data was paramount. Data on statutory corporate tax rates were obtained from World bank and IMF reports. As previously noted in the literature review, there may be a number of qualitative variables that influence FDI inflows such as language and cultural proximity, institutional and risk factors, infrastructure measures, legal and economic policy environmental proxies etc. However, given data limitations and lack of robust results in previous empirical research on FDI in larger advanced economies, analyzing the possible impact of these determinants on FDI in Hungary and Slovakia is beyond the scope of this paper. The basic model specified and estimated in this model for the period 1993-2012 is reported in table 1 following:

Basic Model: FDI = f(Current GDP, Growth rate of Real GDP, Trade Openness, Wage Rate Index, Corporate Tax Rate, EU Enlargement dummy)

The regression results for the basic model of FDI in Hungary confirm that trade openness was a very significant and positive FDI determinant and the wage index, as expected was significant and negatively related to FDI. GDP and GDP growth, the corporate tax rate and the dummy variable representing enlargement of the EU in 2004 were not statistically significant determinants of FDI, although the coefficients had the expected signs, with the exception of the E U dummy, in all variants of the basic model estimated.

TABLE 1: THE BASIC MODEL--HUNGARY

Independent Variables	Coefficients	T stat	P-value
Current GDP	.63132	1.114	.282
Real GDP Growth	751.56	.7553	.461.
Trade Openness	.94737	2.636**	.019
Corporate Tax Rate	-821.01	-1.673	.190
EU Enlargement Dummy	-28385	-1.564	.139
Wage Index	-1679.4	-5.024**	..002

R^2 ..746
** Significant at 5%

For this model, the R square is acceptable suggesting good overall explanatory power and there is no evidence of autocorrelation in other regression test statistics.. The dummy variable for the enlargement of the EU in 2004 did not have a significant impact in any variants estimated for FDI in Hungary. It may be that there was not an immediate impact on FDI inflows for Hungary from EU membership but a more gradual effect as the Hungarian economy transitioned to full integration and regional free trade. Also with export oriented and efficiency seeking FDI, the trade openness variable in the model may be more important to foreign investors and captures some of the impact of expanded intra-EU trade since 2004.

The second model in Table 2 excludes the domestic GDP growth rate which was never significant and did not improve the regression statistics. As shown in Table 2, the R^2 for this model is .737, suggesting

this model has significant explanatory value. The coefficients for trade openness and the wage index remain significant and correctly signed and the corporate tax rate variable becomes significant and with the expected negative sign. This suggests that FDI inflows into Hungary were clearly efficiency seeking from both a cost and tax liability perspective.

Model 2:   FDI = f(Current GDP, Trade Openness, WAGE Index, Corporate Tax rate , EU Enlargement Dummy)

TABLE 2: FDI MODEL Without GDP Growth Rate, Hungary

Independent Variables	Coefficients	t	Significance
Current GDP	.61894	1.107	.284
Trade Openness	.94217	2.658**	.0171
Wage Index	-1664.6	-5.06**	.0001
Corporate Tax Rate	-1072.8	-2.19**	.043
EU Enlargement Dummy	-29694	-1.666	..115

R^2 .737
** Significant at 5%

For this model, the results are robust and also confirm that domestic market size and the EU dummy are not verified as significant determinants of FDI as indicated for the basic model. In a subsequent estimate, the GDP and EU dummy variables were excluded. The R2 decreased slightly to .695 but the coefficients of Trade Openness, the Wage Index, and the Corporate Tax Rate remained highly significant and correctly signed.

Both models were estimated for FDI into Slovakia. Although smaller in economic and demographic size, Slovakia is a strong competitor of Hungary for FDI in Central Europe, in terms of location, costs, cultural and business environment, infrastructure and membership in the EU in 2004. However, one point of distinction is that Slovakia joined the Eurozone in 2009 while Hungary retained the florin as its currency. The period of this study prevents useful empirical analysis of any Euro impact on FDI inflows but this will be examined in future research..

TABLE 3: THE BASIC MODEL - SLOVAKIA

Independent Variables	Coefficients	t	Significance
Current GDP	-.18581	-1.45	.632
Real GDP Growth	16.70	.236	.817
Wage Index	-17.52	-.419	.682

Trade Openness	.0978	2.46**	.032
Corporate Tax Rate	-151.7	-1.85*	.090
EU Enlargement Dummy	628.1	.554	.590

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R2   .758
**Significant at 5% : *Significant at 10%

Table 3 presents the results for Slovakia of the FDI Basic Model estimated. Trade Openness has a significant positive impact on FDI inflows for Slovakia which was the case for Hungary as well. This confirms the likelihood that smaller economies which aggressively pursue economic and trade liberalization are likely to attract export oriented and efficiency seeking FDI. Furthermore, for Slovakia, the corporate tax rate variable has a significant and negative coefficient suggesting that the decline over the period of the statutory corporate tax rate had a positive impact on FDI inflows. During most of this period, Slovakia had lowered its corporate tax rate faster and more aggressively than Hungary and other regional competitors. The coefficients of the remaining FDI determinants in the basic model are not significant, although with the expected signs for real GDP growth, the wage index, and EU Enlargement, except for current GDP which has a negative but insignificant coefficient. As was validated by the regression analysis for Hungary, there is no evidence that domestic market size as measured by GDP impacts the FDI decisions of foreign investors in small economies.

A number of specifications for the basic model, excluding current GDP and/or real GDP growth, including real GDP, using a different wage index based on per hour manufacturing labor cost and removing the Enlargement dummy were also estimated for Slovakia. These results are not reported in this paper because in every estimate the regression coefficients for Trade Openness and the Corporate Tax Rate remained significant and correctly signed. In each variant, the regression statistics were robust and with an R Square of .69 or higher.

CONCLUSION AND FUTURE RESEARCH

This paper has analyzed the experience of two smaller transitioning economies with geographic and some cultural proximity to larger economically advanced countries, a stable political environment, liberal and open FDI policies, trade access to the E U market, and favorable and competitive tax rates and labor costs. Of course, for Hungary and Slovakia, liberal business and economic policies as well as an educated, productive labor force and reasonably reliable transportation, communication and energy infrastructure may have also attracted much FDI from European and global investors, i.e. China and the U S. A recent publication by the American Chamber of Commerce in the Slovak Republic (2013) reported Slovak labor to be the most productive in the Eurozone with the lowest labor costs as provided by Eurostat. The Chamber also cited Hungary as having the second lowest labor cost, slightly higher than Slovakia, of 20 EU countries ranked. The statistical regression results are consistent, robust and significant for both countries. Trade openness, lower wages and corporate tax rates have a significant impact on FDI inflows. The results validate that FDI in these smaller economies is export oriented and efficiency driven and that domestic market size and market growth may not be a determinant of FDI inflows.

In 2004, both countries became full members of the EU along with other regional competitors, like the Czech Republic and Poland, the often clustered Visegrad countries. This accession to the EU might be expected to have a significant positive impact on export oriented FDI. The EU enlargement

dummy however did not have a significant impact on FDI. It may be that trade liberalization in both countries was a strong and continuing process from 1993 on and that overall trade openness during the period captured some of the impact of access to the EU market. Future research may examine any impact of EU and/ or Euro membership through alternative slope shifting dummy variables rather than a once and for all EU dummy. .For Slovakia, the decision to join the Eurozone in 2009 was partially driven by both economic and political factors as a smaller E U member. For Hungary, it appears the decision was more purely political and nationalistic. Recent FDI data suggests that Slovakia has benefited from adopting the Euro and from the tilt toward more business regulation by the current Hungarian government.

Of course, recent economic instability in the Eurozone, post global financial crisis economic uncertainty within the E U and globally, current tension with Russia and the proximity of the conflict in the Ukraine, and euro volatility may have a possible negative impact on FDI. However, there is not enough statistical evidence to confirm this outcome at this time. The paper by Schuh, (2012) discussed earlier makes the case that the recent economic and political instability in the EU since 2008 is more of a temporary interruption in the growth of FDI inflows into Central Europe. He concludes the strategies and objectives for foreign investors in the region will not fundamentally change. However, it is likely that there will be a more realistic and pragmatic analysis of economic competitiveness and overall business climate in potential host countries. In this case, it is possible that Slovakia and Hungary with relative economic and political stability may benefit. The World Investment Report 2014 (UNCTAD) concludes that cautious optimism has returned to the global FDI environment and projections are of a recovery in FDI flows into the E U, although below levels prior to the 2008 financial crisis, with the exceptions of Greece and Portugal. Recent elections in Slovakia continue the commitment to economic liberalization and EU integration. However, the political environment is less clear for Hungary as foreign investors express concern over recent government economic policies.

 Areas for future research on FDI in smaller EU economies should consider more sectoral and industry analysis as economic transformation accelerates in Hungary, Slovakia, the Czech Republic and the Baltics. Limitations on data availability will be the research challenge. Also, extending the data set to better examine the FDI impacts of the global financial crisis, the EU economic slowdown and the recent fiscal crisis will be necessary as some foreign investors hesitate given such uncertainty. Adding a dummy variable to assess Euro membership as a determinant of FDI and a reliable measure of productivity, if available, could enhance the empirical results. Also, proxies for infrastructure development and alternative indices of national competitiveness will be developed and analyzed in future specifications of these models of FDI determinants.

Lastly, analyzing the market share of FDI in the European Union of Hungary and Slovakia through the last 20 years may be useful in understanding the competitiveness of these smaller economies in the market for FDI. Specifying and estimating FDI models for the relative market share of FDI inflows in these countries as a percentage of total FDI inflows in the EU from external investors will extend this research. For smaller member countries on the periphery geographically, institutionally, and culturally, such as Hungary and Slovakia within the E U, in other regional blocs such as ASEAN, the Association of Southeast Nations, this research should be useful and relevant. Analyzing relative share shares of FDI may identify specific determinants that impact competitive and comparative advantage within regional trade blocs and host country attractiveness, such as relative currency stability, relative labor costs and productivity gains, transport and infrastructure variables and relative tax rates However, the obstacles and challenges to quantify and obtain reliable and consistent time series data on these new relative variables for the E U and member countries will be significant.

For smaller host countries in regionally integrated FDI markets and their policy makers and for foreign investors making location and allocation decisions, gaining a greater insight into FDI determinants in a more rapidly integrating but uncertain E U economic environment may be increasingly important. With greatly different member economies by size and structure, divergent country commitments to the integration process, and changing national government policies and business

climates, the challenge for productive and reliable empirical analysis of FDI is great but the potential value to policy makers and multinational enterprises may be equally high. For smaller countries with larger and more powerful neighbors and competitors in the regional market for FDI, the need to increase FDI inflows to maintain economic growth and to accelerate economic liberalization and transition is high as are the economic and political risks of not doing so As more and more capital flows to emerging economies and smaller low cost open economies such as Hungary and Slovakia, this research may provide useful and relevant information on the allocation of FDI in a changing and uncertain global economic environment.

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