

CAPITAL INFLOWS IN THE BALKANS: FORTUNE OR MISFORTUNE?

Kostas Axaroglou ^{*^}

and

Mike Pournarakis ^{**}

Abstract:

The present study measures the effects of various types of capital inflows on key macroeconomic variables of the Balkan countries. Capital inflows appear to have a positive impact on economic growth and the trade sector of the host countries, while they did very little in promoting domestic fixed investment and saving. However, these effects depend on the macroeconomic stability of the countries in the sample. Capital inflows benefit the host countries only after the implementation of a stabilization plan that sets up the stage for further structural reforms. On the other hand, the speed and the advancement of structural reforms do not seem to alter the impact of capital inflows on the process of economic development of the countries in our sample. These results become more relevant given the fact that several of the Balkan countries are soon to become members of the European Union and thus to receive an increased amount of capital inflows.

Key Words : Foreign Direct Investment, Balkan Economies

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* Corresponding author: Democritus University of Thrace, University Campus, 61100, Komotini, Greece; e-mail: kaxarlog@alba.edu.gr.

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^{**} Department of Economics, The Athens University of Economics and Business, 76 Patission Str., 10434, Athens, Greece

“I do not see any reasons why FDI should go down [in Bulgaria]. On the contrary, I see a lot of upward potential.” Nikolay Nikolov, CEO, Bluventures, April 2001.

1. Introduction

The second half of the 80s and the beginning of the 90s found developing countries receiving an increased amount of capital inflows, although their overall share in world capital inflows shrank in favor of developed countries. In the second half of the 90s though world financial crises such as the Mexican Peso crisis (1994) and the Asian crisis (1997-98) had a detrimental impact on capital inflows in developing countries. Researchers and policy makers have debated extensively the role of capital flows in developing countries, with the discussion following four major trajectories.

The early literature focuses on the factors that influence the amount of capital flows across countries. The “push” factors refer to the economic conditions in the source countries that influence capital outflows, while the “pull” factors are associated with the economic conditions in the host countries, such as their efforts towards privatization, structural reform or macroeconomic stability, that appear to be important in attracting capital inflows.

The surge of capital flows in the late 80s and early 90s stimulated a discussion on the policy challenges capital inflows raise to the host countries, such as capital controls and exchange rate policies.¹ However, the financial crises of the 90s and the subsequent massive flee of financial capital out of developing countries initiated a debate on the behavioral characteristics and differences of the various types of capital inflows such as Foreign Direct Investment (FDI) and Portfolio Investment.

Finally, recently, researches turned their attention in evaluating the economic and political implications of capital inflows on the host countries. Specifically, Borensztein et al. (1998), using data from a panel of sixty-nine developing countries find that FDI inflows contribute to the economic growth of only those countries with a minimum threshold of developed human capital. Bosworth and Collins (1999) on the other hand

¹ See Eichengreen (1999) for example.

decompose capital inflows in developing countries and find that FDI increases domestic saving and investment on fixed capital in the host countries, while inflows of loans increase investment but depress domestic savings. Also, portfolio investment does not appear to have any impact on either domestic investment or saving. Mishra et al. (2001) show that capital inflows boost productivity of the host countries, with greater productivity gains for those countries with a skilled workforce and a well-developed physical infrastructure. Finally, Aitken and Harrison (1999) reveal that within the host countries, the local companies with greater R&D capabilities appear to benefit the most from the presence of foreign firms.

However, there is limited empirical evidence on the economic impact of capital inflows in the Balkan countries, perhaps because several of the countries in the region were established in the 1990s. At the same time, this group of countries differs from other developing countries since they are still at the early stages of economic development moving gradually towards a more market oriented economic system.

The present study aims in gauging the contribution of capital inflows on the process of economic development of the Balkan countries controlling at the same time for the efforts towards economic reform pursued by these countries. Specifically, the study evaluates the effects of country-specific total capital inflows, FDI inflows and portfolio inflows on the macroeconomic performance, the external sector and the capital accumulation process of the countries in the sample.

In section 2 a brief theoretical motivation for the study is presented. The data and the econometrics methodology are discussed in section 3. Section 4 incorporates our empirical results. We conclude in section 5.

2. Theoretical Motivation

2.1 Capital Flows and Economic Development

In general, capital flows across countries take three different forms: FDI flows, portfolio investment flows and loans. Overall, capital inflows present developing countries with significant potential benefits as well as risks. Certainly, they increase the pool of funds available to finance domestic investment on fixed capital and thus open up the potential for stronger economic growth. At the same time, FDI inflows result in the

formation of new capital in the host countries creating technological and managerial spillovers to domestic companies.² Also, portfolio investment inflows and loans can potentially improve the host country's domestic financial markets and present incentives for more disciplined and sound macroeconomic policies.³

However, opening domestic financial markets to international capital flows might also harm the host country's process of economic development. Some types of capital inflows, such as portfolio inflows, are rather volatile and can easily fly out from a country in the presence of macroeconomic uncertainty, pushing the country in a deep economic crisis. Also, the recent financial crises in Latin America and Asia revealed that even countries with rather sound macroeconomic policies are in danger of an economic crisis in case of sudden capital outflows. Evidently, the economic impact of capital inflows in developing countries is still debatable.

2.2 Capital Flows and the Balkans

The process of economic development of the Balkans and most of the Eastern European countries differs from other developing countries since it is associated with the transition of these economies from central planning to market orientation. Most of these countries pursued economic reforms in the late 80s and early 90s and researchers and policy makers have extensively debated on the best reform strategies for these economies.

The transition process implies structural reforms in the external and financial sector of these economies associated with, among other things, privatization of the means of production and market and price liberalization. A group of researchers (such as Lipton and Sachs (1990) or Blanchard et al. (1992)) recommends a fast implementation of these reforms while another group (such as Newbery (1991) and Dewatripont and Roland (1995)) argues for a more gradual approach.

Moreover, Fischer and Zahay (2000) claim that capital inflows in transition economies encourage structural reforms and help sustaining these reforms by supporting the institutions and bringing along experience in running the market economy. They also

² These issues are discussed extensively in Borensztein et al. (1998) and Moran (1998).

³ See Obstfeld (1998).

present anecdotal evidence that capital inflows boost economic growth the most in those transition economies that implemented structural reforms faster.

However, very little in the literature has been done in evaluating the channels through which capital inflows impact the transition economies and especially the Balkans. With the present paper we contribute in the literature by empirically evaluating the effects of capital inflows on the process of economic development of the Balkan countries emphasizing at the same time the importance of structural reforms as a precondition for transition economies in benefiting from capital inflows.

3. Data and Methodology

Our empirical analysis depends on a panel of eight Balkan countries which, with the exception of Greece and Turkey, are transition economies that started their transition process some time in the early 90s.⁴ The data span the period between 1990 and 2000 during which the transition economies in the sample implemented their structural reforms. Also, the data include a wide range of macroeconomic variables of the countries in the sample along with data on total capital inflows (CAP_{it}), FDI inflows (FDI_{it}) and portfolio investment inflows (PI_{it}) in the same countries.⁵ Notice finally that (CAP_{it}) is the total capital inflows in each country of the sample, including (FDI_{it}), (PI_{it}) as well as the inflows of private and state loans.

The panel structure of our data allows us to control for country specific effects using both the Fixed and the Random Effects model in all estimations. However, capital inflows in the host countries (our independent variables) might be endogenously correlated with the domestic economic conditions (our dependent variables) in the same countries. For instance, a country-specific shock that stimulates economic growth might also cause a surge in capital inflows in the country. Consequently, the estimated coefficients that measure the impact of capital inflows on domestic economic growth will be biased.

⁴ Albania and Bosnia were dropped from the sample due to the lack of key macroeconomic data.

⁵ In the notation, i is the country index and t the time index. For more on the data see Appendix A.

To account for this endogeneity problem, we employ Instrumental Variables (IV) in our estimations. The IV technique allows us to focus only on the component of capital inflows that depends solely on exogenous factors not associated with economic disturbances that influence the domestic economic conditions of the host countries. In other words, we employ only that part of capital inflows that is related to the economic conditions that influence the supply-side of capital in their source countries, and therefore it is not endogeneously related with the macroeconomic conditions of the host countries. Consequently, the estimated coefficients that gauge the impact of capital inflows on the domestic macroeconomic performance of the host countries will be unbiased and immune from the above discussed endogeneity problem.

In the relevant literature, and in implementing the (IV) technique, researchers usually use the U.S. interest rate and the stage of the U.S. business cycle as appropriate instruments that capture the supply-side of capital inflows in developing countries.⁶ However, these instruments are not appropriate in our case since most of capital inflows in the countries of our sample come from countries of the European Union. Consequently, we create a host country-specific instrument that is the sum of total capital outflows from the two most important source countries of the capital flows to each of the host countries in our sample. Accordingly, we do the same for both FDI inflows and portfolio inflows. We also include in estimations, as an additional instrument, the one year lagged value of capital inflows, FDI inflows and portfolio inflows.⁷

4. Empirical Results

Figure 1 (Appendix B) shows the over time fluctuations for the three types of capital inflows in the countries of our sample: (FDI_{it}) -- “FDI.total” in figure 1-- , (PI_{it}) - - “Portfolio.total” in figure 1.--, and (CAP_{it}) -- “Cflows.total” in figure 1-- , that includes the above two plus other types of capital inflows, (presented in figure 1 as “Other.total”), such as loans, foreign currency deposits etc.

⁶ See Calvo et al. (1993 , 1996).

⁷ We also experimented with the treasury-bill rate of the most important source country of capital inflows for each of the host countries in our sample, but this instrument had little explanatory power on capital inflows, and therefore we dropped it from our estimations.

Table 2 records differences in capital inflows across various groups of countries in our sample. It appears that the Balkan economies, characterized as “early reformers”, attract more (FDI_{it}) and (PI_{it}) inflows than “late reformers”, and the difference is statistically significant. At the same time, the Balkan economies that have implemented structural reforms faster (“fast reformers”) attract more FDI inflows than the ones that are slower in implementing structural reforms (“slow reformers”).⁸

4.1 Capital Inflows and Macroeconomic Performance

As discussed already, and under certain conditions, capital inflows in developing countries tend to boost economic growth in those countries (Borensztein et al. (1998)). In the present section we use our data to test the impact of various types of capital inflows on the growth rate of real per capita GDP and unemployment in the countries of our sample.

In the literature, researchers identify three groups of factors that potentially can influence the economic growth of transition economies: the initial conditions of these countries, the implemented package of economic reforms, and finally some macroeconomic policy factors. Most researchers find the latter two groups to be statistically important in explaining the economic growth of transition economies.⁹

Thus in our estimations, and besides the capital inflows variables, we also control for other factors that potentially can influence the growth of real GDP per capita (ΔGDP_{it}) . Specifically, the share of real government expenditure in real GDP (G_{it}) , the share of real domestic private fixed investment in real GDP (I_{it}) , and the share of real consumption (C_{it}) , real exports (X_{it}) and real imports (IM_{it}) in real GDP are also included in estimations.¹⁰ Theoretically, it is expected that all control variables, besides

⁸ De Melo et al. (1997 and Fischer and Sahay (2000) make the distinction between “fast reformers” and “slow reformers” among transition economies. They base this distinction on indices that measure the extend of structural reforms in the transition economies such as privatization and financial sector reforms, price liberalization etc. In the present study we use the same indices to distinguish between “fast reformers” and “slow reformers” of the countries in our sample.

⁹ See for example Aslund et al. (1996), or Berg et al. (1999).

¹⁰ In earlier estimations we also included dummies for “early reformers” and “fast reformers” in our sample but they were not statistically significant.

(IM_{it}) , to stimulate (ΔGDP_{it}) .¹¹ Reduced form equation (1) is estimated using the IV technique along with the OLS, the Fixed and the Random Effects model, and the results are reported in table 3.¹² In all estimations we use the Lagrange coefficient to test between the OLS estimation and the Fixed Effects model. Then the Hausman coefficient is used to test between the Fixed and the Random Effects model. Finally, only the results of the most appropriate model are reported.

$$\Delta GDP_{it} = f(CF_{it}, G_{it}, I_{it}, C_{it}, X_{it}, IM_{it}) \quad (1)$$

We estimate three different specifications of equation (1) (Model 1 through Model 3). In the first specification we use (CAP_{it}) in place of (CF_{it}) , while in the second and third one (FDI_{it}) and (PI_{it}) respectively.¹³ All three types of capital inflows have a positive impact on (ΔGDP_{it}) , but only the effects of (FDI_{it}) are statistically significant. This is consistent with Razin and Sadka (2002) who show that FDI inflows to developing countries have stronger effects on these countries' GDP growth than portfolio inflows.

However, the estimated elasticities are rather small, perhaps due to the fact that these countries receive relatively small amounts of capital inflows. As reported in table 1, FDI inflows correspond to 2% of real GDP in Bulgaria but only 0.4% in Turkey. Similarly, portfolio investment inflows are at most 15% of real GDP in Croatia but as low as 0.09% of real GDP in FYROM. Consequently, it is quite natural to expect that capital inflows in the host countries of our sample to have a rather small magnitude-wise impact on the growth of real per capita GDP of these countries.

On the other hand, (G_{it}) appears to have a robust expansionary impact on (ΔGDP_{it}) while (C_{it}) , (I_{it}) and (X_{it}) have overall a statistically insignificant impact on economic growth. Finally, (IM_{it}) , as expected, deters economic growth.

¹¹ Notice that all regressors in our estimations are expressed as a share in domestic real GDP. Consequently, these series are stationary since it is not expected any significant trend in the share of a given macroeconomic variable in the country's GDP within eleven years that our data cover. For all variables in our estimations, we tested for unit roots, and unit roots have been rejected.

¹² Notice that in our estimations all regressors are in logarithmic form, so that the estimated coefficients are interpreted in terms of elasticities.

¹³ All three types of country-specific capital inflows are expressed as a share in real GDP of the respective host country.

Policy makers argue that capital inflows create job opportunities in developing countries, especially in case of greenfield investments. Consequently it is interesting to study the effects of capital inflows on unemployment (U_{it}) of the host countries in our sample. Reduced form equation (2) is estimated following the same methodology as before (table 3).

$$U_{it} = f(CF_{it}, G_{it}, I_{it}, C_{it}, X_{it}, IM_{it}) \quad (2)$$

Again, three specifications of equation (2) are estimated (Model 1 through Model 3) as before. All three types of capital inflows appear to depress (U_{it}). Also, a 10% increase in (FDI_{it}) or (PI_{it}) reduces unemployment in the host countries by 0.88% and 1.18% respectively. These estimated coefficients are larger than the ones for capital inflows in equation (1). Perhaps, capital inflows in the host countries of our sample are labor intensive so they tend to reduce unemployment more than they boost overall economic growth.

On the other hand, (G_{it}) depresses unemployment and its effects are robust across various specifications. However, (I_{it}) appears to increase (U_{it}), and its effects are also rather robust. This is a surprising result for which several explanations might exist, and consequently more future research is necessary.¹⁴ All other control variables are statistically insignificant.

Overall, it appears that all three types of capital inflows reduce unemployment in the host countries, while only FDI inflows boost economic growth in these countries. Also, the effects on unemployment appear to be stronger than the ones on economic growth, supporting the idea that capital inflows in the countries of our sample might be labor intensive.

4.2 Capital Inflows and the External Sector

Recently, both researchers and policy makers have extensively debated the effects of trade openness on the process of economic development of the transition economies

¹⁴ We reestimated equation (2) without the capital inflows variable. Again (I_{it}) has a positive impact on unemployment but the estimated coefficient is not statistically significant.

that followed the strong “export-led” growth of several Asian countries in the 80s. Indeed, several studies conclude that opening up to international trade and capital inflows appear to accelerate the process of economic development.¹⁵

Most of the Balkan economies in our sample have recently undertaken significant steps in liberalizing their external sector. At the same time, there is a trend among developing countries in choosing exchange rate regimes that make them immune from financial crises, moving towards either flexible or pegged exchange rates.¹⁶ As presented in table 2, pegged exchange rates, with respect to managed float, are overall associated with lower exports and more imports while flexible exchange rates appear to boost exports. Finally, the Balkan countries in our sample that are characterized as “early reformers” show more exports and imports than those characterized as “late reformers”.

Thus, in the present section we evaluate the effects of capital inflows on real exports (X_{it}) and imports (IM_{it}) as a share of real GDP of the economies in our sample. In gauging the effects of capital inflows on (X_{it}), reduced form equation (3) is estimated following the same methodology as before, and the results are reported in table 4. In estimations, and in addition to (G_{it}) and (I_{it}), we include dummy variables for the cases where an economy was under pegged (PEG_{it}) or flexible (FLX_{it}) exchange rates.¹⁷ Also, dummy variables for the “early reformers” ($EREF_i$) are included in estimations.

$$X_{it} = f(CF_{it}, G_{it}, I_{it}, PEG_{it}, FLX_{it}, EREF_i) \quad (3)$$

All three types of capital inflows appear to boost domestic exports indicating that capital inflows finance production activities with an export orientation. All other control variables do not appear important in influencing domestic exports.

¹⁵ See Edward (1993, 1998), Frankel and Romer (1999) and Sachs and Warner (1995) among others.

¹⁶ Fischer (2001) refers to it as the “bipolar view”.

¹⁷ See *IMF Annual Report* (2000).

In testing for the effects of capital inflows on imports we estimate reduced form equation (4) (table 4). Here, we also include in estimations the share of real consumption (C_{it}) in real GDP.¹⁸

$$IM_{it} = f(CF_{it}, G_{it}, C_{it}, I_{it}, PEG_{it}, EREF_i) \quad (4)$$

All three types of capital inflows appear to increase (IM_{it}), with FDI having relatively the largest impact among the three. Also, government spending boosts imports and the results are robust across various specifications. On the other hand, domestic consumption appears having mixed effects on (IM_{it}). Overall, capital inflows stimulate both the share of exports and imports in domestic GDP.

Policy makers in developing countries are concerned that trade openness deteriorates the trade account. For that we estimated the effects of capital inflows on the difference between the share of exports and the share of imports in domestic GDP. All three types of capital inflows have a positive but statistically insignificant impact on the trade account, leaving it thus virtually unaffected.¹⁹

4.3 Capital Inflows and Capital Accumulation

Capital accumulation and its technological spillovers represent the driving forces of economic development and prosperity. Certainly, capital accumulation can take the form of an increase in either fixed capital or human capital. In the neoclassical Solow growth model output per worker grows by the rate of technological change that usually is embodied in the formation of new fixed capital. On the other hand, in endogenous growth models, endogenously driven improvements in human capital lead to economic growth and appear to be crucial for economic development (Lukas (1988)).

However, several developing countries, and due to usually low levels of national savings, lack the resources to finance the development of either fixed or human capital, and thus foreign capital inflows can play a crucial role in that aspect. At the same time,

¹⁸ Notice also that we do not include in estimations a dummy for flexible exchange rates (FLX_{it}) since it appears that this exchange rate regime does not cause a different behavior of imports than managed float (table 2).

¹⁹ We do not report these results in the paper but are available upon request.

capital inflows in transition economies can facilitate a faster implementation of structural reforms that make the economic system more efficient.

In the present section we study the impact of capital inflows on domestic fixed investment and private saving in the transition economies of our sample. Bosworth and Collins (1999), using a large sample of Latin American, Asian and African countries find that FDI inflows stimulate domestic investment and private saving, while loans boost investment but deter saving. Also, portfolio investment has statistically insignificant effects on either domestic saving or fixed investment.

In studying the effects of capital inflows on domestic investment we estimate reduced form equation (5) (table 5). In estimations, and in addition to capital inflows, we also control for government spending, the growth rate of GDP, the share of private saving in domestic GDP (S_{it}), and dummy variables for “early” ($EREF_i$) and “fast reformers” ($FREF_i$) of the countries in our sample.²⁰

$$I_{it} = f(CF_{it}, G_{it}, \Delta GDP_{it}, S_{it}, EREF_i, FREF_i) \quad (5)$$

In estimations, capital and portfolio inflows do not seem to influence the share of domestic fixed investment in GDP (I_{it}) in the economies of our sample, while FDI inflows appear to deter (I_{it}). This last result is consistent with De Backer and Sleuwagen (2003) who find that FDI inflows in Belgium tend to crowd out domestic entrepreneurial activity. On the other hand, the growth rate of domestic GDP (ΔGDP_{it}) along with government spending (G_{it}) appear to stimulate domestic fixed investment at least in some specifications. Also, as expected, private saving (S_{it}) increases (I_{it}) since it represents funds that finance the formation of fixed capital. Finally, the timing and the pace of implementing structural reforms appears also to promote domestic investment on fixed capital, since transition economies that are “early reformers” ($EREF_i$) and “fast reformers” ($FREF_i$) seem to allocate a larger share of their GDP on fixed capital.

²⁰ Unfortunately, it was not possible to acquire a consistent across countries variable for private saving. Consequently, we calculated the share of private saving in real GDP as

$S_{it} = I_{it} + (G_{it} - T_{it}) + (X_{it} - IM_{it})$, where (T_{it}) is the share of government’s tax revenue in domestic GDP.

On the other hand, in gauging the effects of capital inflows on private saving (S_{it}) we estimate reduced form equation (6) (table 5). Recent research indicates that precautionary saving is a very important component of private saving in countries such as the U.S. and England.²¹ Consequently, in estimations we also include the rate of unemployment (U_{it}) in order to capture the amount of precautionary saving consumers perform in the presence of economic uncertainty proxied by the rate of unemployment.

$$S_{it} = f(CF_{it}, G_{it}, \Delta GDP_{it}, U_{it}, EREF_i) \quad (6)$$

Total capital inflows (CAP_{it}) and portfolio inflows (I_{it}) have a positive and statistically significant impact on the share of private saving in domestic GDP (S_{it}), with the FDI inflows having minimal effects on (S_{it}). Government spending appears to stimulate domestic saving (at least in some specifications), while the results are mixed in case of “early reformers”. Overall, it appears that capital inflows have a rather weak impact on domestic fixed investment and saving.

4.4 Macroeconomic Stabilization and Capital Inflows

The transition from central planning to a market economy involves the implementation of significant structural reforms in liberalizing the operation of these economies. Along with it, a stabilization plan is usually implemented to set the stage for a successful transition to a market economy. The transition economies in our sample implemented a stabilization plan some time in the first half of the 90s following conditions of significant macroeconomic instability with hyperinflation and high unemployment.²²

Macroeconomic stability though might be a necessary condition for a transition economy to benefit from capital inflows, since in several cases a stable macroeconomic environment attracts better types of capital inflows (such as FDI vs. portfolio investment).²³ In testing this idea, dummy variables are constructed for the years before

²¹ See Carroll and Samwick (1998), Gourinchas and Parker (2001), and Wilson (1998) among others.

²² For instance, Croatia and Romania implemented a stabilization plan in October of 1993, following inflation of 1,903% and 314% respectively the year before.

²³ See Lipsey (2001).

$(NSTAB_{it})$ and after $(STAB_{it})$ the implementation of a stabilization plan in the transition economies of our sample. Then the interaction variables between (FDI_{it}) and these dummy variables pick up the effects of FDI inflows in the transition economies of our sample before (FDI_{it}^{NST}) and after (FDI_{it}^{ST}) the implementation of the stabilization plan. Again, reduced form equations (1) through (6) are estimated (results are reported in table 6).²⁴

It appears that FDI inflows before the implementation of a stabilization plan do not influence any of the key macroeconomic variables in our analysis. On the other hand, FDI inflows after the implementation of a stabilization plan promote economic growth and both exports and imports, while they reduce unemployment and domestic investment of the transition economies that receive these inflows. Thus, macroeconomic stability appears important in allowing countries in transition to benefit from FDI inflows.

4.5 Structural Reforms and Capital Inflows

The implementation of a stabilization plan was usually the beginning of a series of structural reforms towards economic liberalization. Certainly, the speed of implementing these reforms varies across countries and over time, with some transition economies following the ‘shock therapy’ approach, and some others moving more gradually in implementing these reforms. The advocates of the former approach argue that a fast implementation of structural reforms sets the stage for rapid economic growth of the transition economies. On the other hand, the supporters of the latter approach recommend a slower and more careful implementation of structural reforms in avoiding major economic disruptions and unbalances.

Here, we study how the speed in implementing structural reforms in the Balkan countries influences the economic effectiveness of FDI inflows in those countries. Thus, we construct a dummy variable $(EREF_i)$ for those transition economies that started the

²⁴ In this section, and for brevity reasons, we focus only on FDI and not on the other types of capital inflows used so far in our analysis.

implementation of structural reforms early (“early reformers”), and also a dummy variable ($LREF_i$) for the transition economies classified as “late reformers”.²⁵

Then we create interaction variables (FDI_{it}^{EREF}) and (FDI_{it}^{LREF}) between (FDI_{it}) and ($EREF_{it}$) for the “early reformers” and (FDI_{it}) and ($LREF_{it}$) for the “late reformers” respectively, estimating again equations (1) through (6) (results are reported in table 7).

Overall, it appears that both interaction variables (FDI_{it}^{EREF}) and (FDI_{it}^{LREF}) have the appropriate sign and are statistically significant in most estimations. Also the estimated coefficients indicate that FDI inflows in “early reformers” have a larger impact on unemployment, exports, imports and fixed investment, but a smaller impact on economic growth than FDI inflows in “late reformers”. Otherwise, FDI inflows appear to have a rather homogeneous economic impact in the two groups of countries.²⁶

However, Fischer and Sahay (2000) argue that transition economies that follow a fast implementation of structural reforms benefit the most from capital inflows. To study this hypothesis for the Balkan countries, we construct dummy variables for “fast” ($FREF_{it}$) and “slow” ($SREF_{it}$) reformers among the transition economies in our sample.²⁷ Then, interaction variables between (FDI_{it}) and these dummies are constructed for the “fast” (FDI_{it}^{FREF}) and “slow” (FDI_{it}^{SREF}) reformers in our sample. Again, equations (1) through (6) are estimated (results are reported in table 8).

The estimated coefficients for the interaction variables (FDI_{it}^{FREF}) and (FDI_{it}^{SREF}) are statistically significant and of the appropriate sign in most of the estimations. Also, the estimated elasticities show that the speed with which structural reforms are

²⁵ See Fischer and Sahay (2000).

²⁶ Also, the difference of the estimated coefficients for (FDI_{it}^{EREF}) and (FDI_{it}^{LREF}) is not statistically significant.

²⁷ The speed of implementing structural reforms is measured based on relevant indices developed in de Melo et al. (1997).

implemented in the Balkan countries doesn't alter the effects of FDI inflows on key macroeconomic variables in these countries.²⁸

5. Conclusions

The present study measures the effects of various types of capital inflows on the process of economic development of the Balkan countries. It appears that capital inflows have a positive impact on economic growth and the trade sector of the host countries, while they did very little in promoting domestic fixed investment and saving.

However, these effects depend on the macroeconomic stability of the countries in the sample. Capital inflows benefit the host countries only after the implementation of a stabilization plan that sets up the stage for further structural reforms. On the other hand, the speed and the advancement of structural reforms do not seem to alter the impact of capital inflows on the process of economic development of the countries in our sample.

Future research should address two important issues: first, the reason why capital inflows in the transition economies of our sample do not seem to boost either domestic fixed investment or saving; and second the links that make macroeconomic stability such an important precondition in realizing the benefits of capital inflows in transition economies.

²⁸ Also, the difference of the estimated coefficients for (FDI_{it}^{FREF}) and (FDI_{it}^{SREF}) is not statistically significant.

APPENDIX A

Countries: There are eight countries in our sample: Bulgaria, Croatia, FYROM, Greece, Moldova, Romania, Slovenia, Turkey.

Capital Inflows: “Total Capital Inflows” include the three types of capital inflows as classified by the IMF: “Foreign Direct Investment Inflows”, “Portfolio Inflows” and “Other”. Also “Portfolio Inflows” are portfolio inflows for equity only. (Source: Balance of Payments Statistics; IMF).

Macroeconomic Variables: All macroeconomic variables in use are in real terms (using the respective country’s CPI for deflating the nominal values). (Source: IMF Financial Statistics).

APPENDIX B

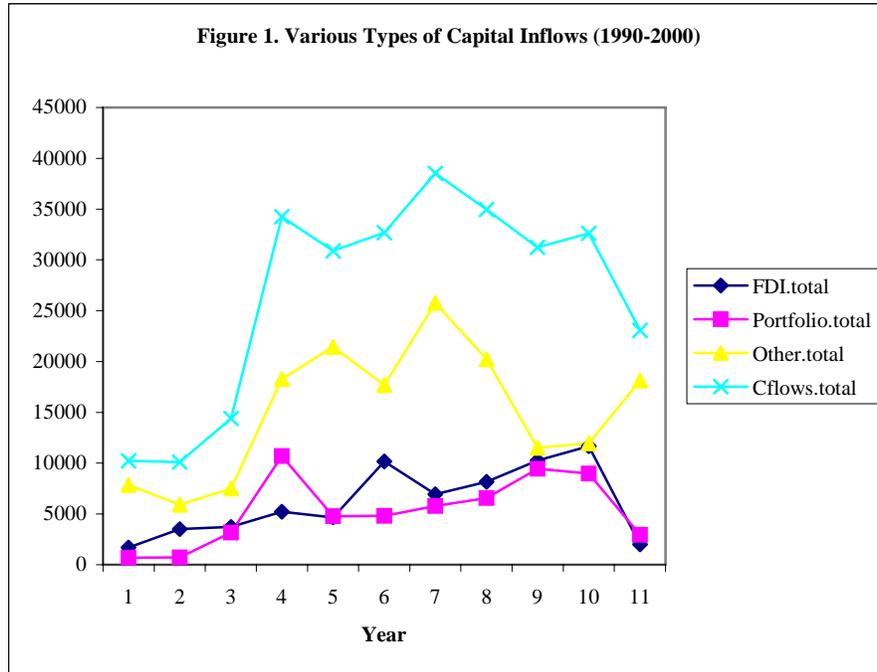


Table 1.
Macroeconomic Statistics of the Balkan Countries

Country	Cons.	Invest.	Gov. Spend.	Exports	Imports	Equity	FDI	Popul.	Unempl.
Bulgaria	0.705 (0.069)	0.150 (0.031)	0.162 (0.029)	0.392 (0.081)	0.422 (0.087)	0.002 (0.002)	0.020 (0.023)	8.496 (0.276)	11.775 (4.485)
Croatia	-	-	-	0.427 (0.146)	0.164 (0.055)	0.154 (0.125)	0.006 (0.005)	4.553 (0.080)	17 (0.283)
FYROM	0.741 (0.029)	0.173 (0.011)	0.184 (0.014)	0.329 (0.039)	0.475 (0.065)	0.0009 (0.001)	0.010 (0.012)	2.028 (0.071)	31.680 (5.331)
Greece	0.730 (0.016)	0.210 (0.018)	0.148 (0.005)	0.093 (0.006)	0.230 (0.010)	-	0.010 (0.002)	10.412 (0.138)	9.163 (1.242)
Moldova	0.678 (0.107)	0.191 (0.018)	0.226 (0.054)	0.457 (0.056)	0.610 (0.024)	0.002 (0.002)	0.035 (0.014)	4.197 (0.310)	0.875 (0.206)
Romania	0.684 (0.055)	0.193 (0.023)	0.134 (0.009)	0.211 (0.039)	0.284 (0.045)	0.003 (0.002)	0.017 (0.017)	22.748 (0.262)	8.928 (2.501)
Slovenia	0.567 (0.014)	0.233 (0.033)	0.217 (0.021)	0.459 (0.019)	0.513 (0.019)	0.0006 (0.001)	0.009 (0.004)	1.99 (0.005)	8.464 (1.562)
Turkey	0.684 (0.013)	0.238 (0.017)	0.123 (0.010)	0.116 (0.023)	0.197 (0.046)	0.002 (0.002)	0.004 (0.001)	60.176 (2.791)	7.222 (0.893)

Notes: Each cell in the table records the average (for the years between 1990 and 2000) share of the real value of a given macroeconomic variable in the real value of the GDP of a given country. Standard deviations of the country-specific corresponding variables are reported in parenthesis.

Table 2.
Differences Across Groups of Countries

Group of Countries	FDI_{it}	PI_{it}	ΔGDP_{it}	U_{it}	X_{it}	IM_{it}	I_{it}	S_{it}
Early vs. Late Reformers								
Late Reformers	-2.448	-4.444	0.0122	2.0918	1.345	1.581	-1.750	-1.245
Early Reformers	3.023*	1.541*	-0.0017	2.120	3.771*	3.945*	-1.424*	-2.885*
	(6.111)	(4.353)	(-0.892)	(0.152)	(2.427)	(2.286)	(8.561)	(3.314)
Fast vs. Slow Reformers								
Slow Reformers	-1.711	-3.059	0.0082	1.972	1.0543	1.671	-1.636	-0.841
Fast Reformers	0.705*	-1.612	0.0019	2.259	1.440	2.551	-1.511*	-8377
	(2.411)	(1.055)	(-0.304)	(1.238)	(0.454)	(1.0643)	(1.961)	(0.011)
Exchange Rate Regime								
Managed Float					4.999	4.548		
Pegged Exchg. Rates					-0.304*	0.819*		
					(-5.523)	(3.437)		
Flexible Exchg. Rates					2.487*	2.667		
					(-2.136)	(-1.429)		

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

Table 3.
Capital Inflows and Macroeconomic Performance in the Balkans

Independent Variables	Dependent Variable: ΔGDP_{it}			Dependent Variable: U_{it}		
	Model 1 (OLS)	Model 2 (OLS)	Model 3 (OLS)	Model 1 (OLS)	Model 2 (OLS)	Model 3 (OLS)
$Const$	0.026 (0.858)	0.085* (2.749)	0.053 (1.309)	4.904* (2.695)	3.338* (2.911)	2.961 (1.184)
CAP_{it}	0.0004 (0.711)			-0.0557* (-2.371)		
FDI_{it}		0.003* (3.764)			-0.0881* (-3.791)	
PI_{it}			0.002 (1.408)			-0.1179* (-2.269)
G_{it}	0.015** (1.674)	0.029* (3.099)	0.025** (1.907)	-0.742 (-1.458)	-0.603** (-1.796)	-1.541* (-1.985)
I_{it}	0.004 (0.367)	0.014 (1.286)	0.004 (0.343)	1.649* (3.364)	0.751* (2.181)	1.593* (3.042)
C_{it}	-0.025 (-1.027)	0.022 (0.917)	-0.020 (-0.736)	2.669* (2.021)	2.292* (2.666)	3.243** (1.908)
X_{it}	0.002 (1.321)	-0.0006 (-0.631)	0.003** (1.647)	0.0663 (1.044)	-0.0133 (-0.466)	-0.0825 (-1.034)
IM_{it}	-0.003** (-1.704)	-0.0009 (-1.039)	-0.004** (-1.958)	-0.0630 (-1.038)	0.0145 (0.568)	0.0823 (0.912)
\bar{R}^2	0.064	0.232	0.041	0.384	0.379	0.418
$SAMPLE$	47	67	39	35	55	27

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

Table 4.
Capital Inflows and the External Sector in the Balkans

Independent Variables	Dependent Variable: X_{it}			Dependent Variable: IM_{it}		
	Model 1 (OLS)	Model 2 (OLS)	Model 3 (OLS)	Model 1 (OLS)	Model 2 (OLS)	Model 3 (OLS)
<i>Const</i>	-3.055 (-0.817)	6.061 (1.453)	3.583 (0.524)	6.471 (0.999)	8.658 (1.359)	25.8116* (3.719)
<i>CAP_{it}</i>	0.679* (10.457)			0.637 * (9.002)		
<i>FDI_{it}</i>		0.870 * (6.919)			1.075 * (8.822)	
<i>PI_{it}</i>			0.939 * (5.763)			1.023* (7.856)
<i>G_{it}</i>	3.804* (2.261)	2.445 (1.346)	1.749 (0.529)	5.056* (2.451)	2.343 (1.239)	9.3152* (3.243)
<i>C_{it}</i>				-1.021 (-0.165)	-11.634* (-2.666)	13.5687* (2.179)
<i>I_{it}</i>	-4.129** (-1.776)	-1.167 (-0.555)	-2.378 (-0.574)	-0.477 (-0.191)	2.856 (1.187)	0.225 (0.071)
<i>PEG_{it}</i>	-0.506 (-0.537)	-2.768* (-2.975)	-2.158 (-1.576)	-0.401 (-0.472)	-1.129 (-1.361)	-0.526 (-0.561)
<i>FLX_{it}</i>	1.817 (1.282)	-0.445 (-0.342)	0.436 (0.167)			
<i>EREF_i</i>	0.729 (0.534)	-1.597 (-1.195)	-0.988 (-0.386)	0.088 (0.049)	-5.059 * (-4.455)	2.671 (1.038)
\bar{R}^2	0.804	0.616	0.693	0.774	0.656	0.792
<i>SAMPLE</i>	47	67	39	47	67	39

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

Table 5.
Capital Inflows and Capital Accumulation in the Balkans

Independent Variables	Dependent Variable: I_{it}			Dependent Variable: S_{it}		
	Model 1 (OLS)	Model 2 (OLS)	Model 3 (OLS)	Model 1 (OLS)	Model 2 (OLS)	Model 3 (OLS)
$Const$	-1.554* (-3.724)	-1.707* (-7.166)	-1.385 * (-4.807)	3.797* (5.547)	0.241 (0.077)	2.687* (2.778)
CAP_{it}	-0.005 (-0.613)			0.095* (6.399)		
FDI_{it}		-0.021** (-1.860)			-0.052 (-0.348)	
PI_{it}			-0.013 (-1.322)			0.201* (4.658)
G_{it}	0.035 (0.224)	-0.020 (-0.162)	0.621** (1.791)	2.664* (7.263)	-0.087 (-0.049)	3.265* (5.843)
ΔGDP_{it}	5.784** (1.856)	2.939 (1.555)	-0.433 (-0.088)	4.911 (0.719)	10.162 (0.469)	-3.973 (-0.446)
S_{it}	0.158* (3.833)	0.144* (5.504)	-0.099 (-0.687)			
U_{it}				0.149 (0.520)	-0.589 (-0.535)	1.025* (2.570)
$EREF_i$	0.320* (3.669)	0.337* (5.080)	1.027* (2.671)	-0.529* (-2.153)	1.503** (1.675)	0.732 (1.219)
$FREF_i$	0.078 (0.683)	0.102** (1.785)	0.168** (1.754)			
\bar{R}^2	0.782	0.760	0.889	0.758	0.048	0.773
$SAMPLE$	27	40	19	30	50	22

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

Table 6.
FDI Inflows and Macroeconomic Stabilization

Independent Variables	Dependent Variables					
	ΔGDP_{it}	U_{it}	X_{it}	IM_{it}	I_{it}	S_{it}
	(OLS)	(OLS)	(REM)	(OLS)	(OLS)	(OLS)
<i>Const</i>	0.105* (2.945)	4.205* (2.605)	9.193* (2.603)	5.046 (1.133)	-1.707* (-7.059)	4.773* (4.489)
FDI_{it}^{ST}	0.004* (3.892)	-0.098* (-3.122)	0.681* (6.025)	0.793* (8.627)	-0.020** (-1.822)	0.012 (0.188)
FDI_{it}^{NST}	-0.0006 (-0.0549)	0.141 (0.444)	-2.486 (-1.520)	-1.342 (-1.011)	-0.043 (-0.382)	-0.431 (-0.940)
G_{it}	0.037* (3.311)	-0.630 (-1.329)	4.256* (2.828)	3.637* (2.753)	-0.017 (-0.134)	1.249* (2.051)
I_{it}	0.017 (1.258)	1.191* (2.446)	-0.681 (-0.368)	0.344 (0.207)		
C_{it}	0.021 (0.795)	2.638* (2.524)		-13.679* (-3.797)		
X_{it}	0.001 (0.693)	0.056 (0.9114)				
IM_{it}	-0.003 (-1.573)	-0.039 (-0.583)				
ΔGDP_{it}					2.915 (1.517)	11.907 (1.380)
S_{it}					0.142* (5.201)	
U_{it}						-1.337* (-3.350)
PEG_{it}			-1.44118** (-1.8199)	-0.745 (-1.290)		
FLX_{it}			-0.308 (-0.292)			
$EREF_i$			-2.565* (-2.187)	-4.288* (-4.387)	0.339* (4.968)	-0.451 (-1.408)
$FREF_i$					0.104** (1.762)	
\bar{R}^2	0.288	0.368	0.493	0.689	0.752	0.542
<i>SAMPLE</i>	51	40	51	51	40	35

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

Table 7.
FDI Inflows and the Timing of Economic Reform

Independent Variables	Dependent Variables					
	ΔGDP_{it}	U_{it}	X_{it}	IM_{it}	I_{it}	S_{it}
	(OLS)	(OLS)	(OLS)	(OLS)	(OLS)	(OLS)
<i>Const</i>	0.077* (2.563)	3.109* (2.607)	8.410* (2.048)	12.451* (2.168)	-1.629* (-6.762)	0.205 (0.068)
FDI_{it}^{EREF}	0.002* (2.181)	-0.098* (-3.629)	1.076* (7.382)	1.377* (10.511)	-0.029* (-2.354)	-0.132 (-0.863)
FDI_{it}^{LREF}	0.004* (4.267)	-0.076* (-2.719)	0.574* (3.409)	0.642* (4.247)	-0.0009 (-0.052)	0.231 (1.091)
G_{it}	0.029* (3.097)	-0.643** (-1.882)	2.186 (1.253)	2.029 (1.206)	0.021 (0.169)	0.094 (0.056)
I_{it}	0.009 (0.897)	0.676** (1.877)	0.718 (0.334)	5.731* (2.545)		
C_{it}	0.019 (0.849)	2.163* (2.455)		-11.143* (-2.870)		
X_{it}	-0.0004 (-0.473)	-0.010 (-0.351)				
IM_{it}	-0.0007 (-0.862)	0.015 (0.575)				
ΔGDP_{it}					1.217 (0.549)	-14.468 (-0.581)
S_{it}					0.122* (4.089)	
U_{it}						-0.319 (-0.295)
PEG_{it}			-2.622* (-2.935)	-0.826 (-1.113)		
FLX_{it}			-0.602 (-0.482)			
$EREF_i$			-2.475** (-1.865)	-6.213* (-5.927)	0.365* (5.352)	1.689* (1.922)
$FREF_i$					0.082 (1.421)	
\bar{R}^2	0.265	373	0.647	0.728	0.767	0.098
<i>SAMPLE</i>	67	55	67	67	40	50

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

Table 8.
FDI Inflows and the Speed of Economic Reform

Independent Variables	Dependent Variables					
	ΔGDP_{it}	U_{it}	X_{it}	IM_{it}	I_{it}	S_{it}
	(OLS)	(OLS)	(REM)	(OLS)	(OLS)	(OLS)
<i>Const</i>	0.085* (2.722)	4.106* (2.539)	8.950* (2.415)	3.271 (0.714)	-1.753* (-7.025)	5.092* (4.539)
FDI_{it}^{FREF}	0.002* (2.404)	-0.106* (-3.096)	0.696* (5.259)	0.744* (7.143)	-0.019** (-1.717)	-0.006 (-0.088)
FDI_{it}^{SREF}	0.006* (5.886)	-0.072* (-2.003)	0.620* (3.556)	0.902* (6.117)	-0.031 (-1.627)	0.039 (0.458)
G_{it}	0.038* (4.036)	-0.568 (-1.261)	3.759* (2.394)	3.252* (2.464)	-0.045 (-0.344)	1.223* (1.991)
I_{it}	0.007 (0.583)	1.083* (2.177)	-0.249 (-0.129)	0.040 (0.023)		
C_{it}	0.0003 (0.014)	2.489* (2.337)		-16.095* (-4.210)		
X_{it}	0.002 (1.241)	0.057 (0.9333)				
IM_{it}	-0.003* (-1.983)	-0.044 (-0.677)				
ΔGDP_{it}					4.006 (1.618)	8.902 (0.855)
S_{it}					0.144* (5.480)	
U_{it}						-1.466* (-3.647)
PEG_{it}			-1.393** (-1.678)	-0.903 (-1.526)		
FLX_{it}			0.059 (0.054)			
$EREF_i$			-2.633* (-2.149)	-4.850* (-4.825)	0.347* (5.066)	-0.52834** (-1.644)
$FREF_i$					0.092 (1.557)	
\bar{R}^2	0.461	0.374	0.451	0.677	0.756	0.533
<i>SAMPLE</i>	51	40	51	51	40	35

Notes: T-statistics are reported in parenthesis. A (*) or (**) next to a reported coefficient indicates its significance at 0.01 and 0.05 levels.

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