INSTITUTIONS AS A MEDIATOR OF THE EFFECT OF CROSS-BORDER MERGERS &ACQUISITIONS ON DOMESTIC INVESTMENT

Jelena Zvezdanović Lobanova, Davorin Kračun, Alenka Kavkler*

Abstract

In this article we analyse the impact of the interaction between cross-border mergers and acquisitions and the quality of the institutional setting on domestic investment using panel data for 22 European transition countries from 2000 to 2014. We investigate whether the progress and durability of institutional reforms have a crucial influence on the economic performance of cross-border mergers and acquisitions in transition countries. Our empirical findings indicate that contemporaneous cross-border mergers and acquisitions have a crowding-out effect on domestic investment in the year of merger or acquisition, but the influence of their lagged level has a strong crowding-in effect one year later. We find that the overall quality of the institutional setting and the rule of law negatively and significantly affect the relation between this type of foreign direct investment and domestic investment, both in the short and long run. Political stability exhibits a positive and significant impact on domestic investment in the current period and over time.

Keywords: cross-border mergers and acquisitions, institutional setting, domestic investment, transition countries

JEL Classification: E22, F21, F23, O52

1. Introduction

The growth of Foreign Direct Investment (FDI) is increasing considerably, as the technology development and the process of international capital flows liberalization. This is also relevant for cross-border mergers and acquisitions (C-B M&A), the economic effects of which depend on the underlying economic and political conditions in the host countries (Pinto and Zhu, 2009). In the early stages of transition C-B M&A have a dominant position in the FDI structure. The majority of countries initiate a process of privatization in which C-B M&A transactions are of crucial importance. The foreign privatization accounts for a substantial share of the FDI flows in transition countries (Rojec, 2005). By opening their markets to foreign goods and capital, transition countries allow the unhindered entry of multinational companies in order to overcome an obsolete production structure and mitigate inherited systematic problems in the economy.

* Jelena Zvezdanović Lobanova, Center for Economic Research, Institute of Social Sciences, Belgrade, Serbia (jzvezdanovic@idn.org.rs);
Davorin Kračun, Faculty of Economics and Business, University of Maribor, Maribor, Slovenia (davorin.kracun@um.si);
Alenka Kavkler, Faculty of Economics and Business, University of Maribor, Maribor, Slovenia (alenka.kavkler@um.si).

The privatization of state-owned enterprises offers unique one-off investment opportunities and, at the same time, provides conditions for market economy development (Djarova, 2004). This process does not include a simple ownership transformation of state enterprises but also the creation of favourable environment for the emergence and development of the private sector. FDI assists in the process of economic growth of these economies since it increases the degree of competition in the domestic market, as well as the efficiency of local companies (Kostovc *et al*., 2007). This type of capital flow represents opportunity to reduce technological gap between transition and developed countries. It is seen as useful factor for convergence and catching up, whose impact strongly depends on quality of domestic policy management (Lipschitz *et al*., 2001). For instance, Hudea and Stancu (2012) argue that FDI makes a greater contribution to the income growth of countries which implement comprehensive privatization programmes.

The main objective of this paper is to investigate the role of the institutional setting as a determinant of economic effects of C-B M&A on domestic investment with the help of dynamic panel data covering 22 European transition countries from 2000 to 2014[1]. For that purpose, we employed multiple interaction terms between C-B M&A and each of the governance indicators. The results of this research will broaden our understanding of the interdependence of the institutional setting and the economic effects of C-B M&A on domestic investment. We did not succeed in finding any studies in literature that deal explicitly with the nexus between institutions and the economic effects of M&A because authors usually focus on the impact of aggregate inward FDI flows on the host country. We filled this gap by using the institutional analysis for a better understanding of the interdependence of the institutional setting and the economic effects of C-B M&A on domestic investment in European transition countries. To the best of our knowledge, there is only one empirical study (Jude, 2014) dealing with the impact of C-B M&A on domestic investment in transition countries. In addition, by taking into account various governance indicators, we investigated the most exposed areas of the institutional setting.

This paper is organized into five sections. In Section 2 we give a literature review of the papers dealing with economic effects of FDI inflows as well as C-B M&A on domestic investment; Section 3 provides model and data used in the empirical analysis; in Section 4 we present the results and provide interpretations.

2. Literature Review

There is no scientific consensus on the economic effects of FDI inflows as well as C-B M&A in host countries. FDI is usually considered as the major form of international capital flows that enables long-run economic growth, competitiveness and successful integration of countries into the global economy. Its positive economic effects are already visible in the short run, while those from C-B M&A can be mainly expected over time. These

1 Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Georgia, Estonia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine.

benefits are usually reflected in the increase of total investible funds, rising employment, availability of innovative technology, introduction of contemporary management practices and preventing potentially profitable assets from being wiped out (UNCTAD, 1999; Ovin and Maček, 2010).

In the year of merger or acquisition, this type of investment usually causes lay-offs, crowding-out of domestic investment, downgrading, closure or relocation of production. Among the other characteristics there are lack of reciprocal access for local firms in the market for corporate control, anti-competitive behaviour, reduction of host country's exports or increase of imports *etc*. (OECD, 2007). The economic effects of C-B M&A at the micro- and macro- economic level largely depend on the host country institutional quality. Chan *et al*. (2008) argue that economic, political and social institutions have a strong impact on variation and level of foreign affiliate performance. The authors show that the extent to which the level of institutional development affects this performance is significantly associated with the presence of institutional voids, the relative influences of institutional ability and strategic choices of actions.

In terms of the influence on domestic investment, one group of authors finds evidence that FDI inflows have a positive or neutral effect on domestic investment, while others point out that an increase in FDI inflow causes a strong crowding-out effect. Farla *et al.* (2016) show that FDI inflows contribute positively to domestic investment. They point out that this positive spillover effect is often offset by the negative impact of rent-seeking interests in the provision of preferential treatment of foreign investors on investment. Their findings are consistent with the results of Munemo (2014) who argues that the complementarity between FDI and domestic investment is determined by the quality of business regulation. Similarly, Kamaly (2014) finds out that FDI stimulate domestic investment in most countries included in his sample but this impact largely depends on country-specific factors which had influence on that nexus. He shows that while the immediate effect of FDI on investment is mostly positive, the impact of lagged FDI values could cause crowding-out effect in some countries. Al-Sadig (2013) also provides evidence about the crowding-in effect of FDI on domestic private investment on the sample of developing countries. He indicates that the positive effects of FDI in low-income developing countries are determined by the availability of human resources.

By considering the effects of two modes of FDI on domestic investment on the sample of developing countries, Ashraf and Herzen (2014) find that C-B M&A do not have a significant crowding-out effect on domestic investment, while greenfield FDI has a large effect. Calderon *et al*. (2004) argue that both greenfield and M&A lead domestic investment but are driven by gross domestic product (GDP) growth. According to their findings, economic growth represents an effective "pull" factor for foreign investment, and from the other side, FDI stimulate the growth of domestic investment in the future.

Wang (2010) points out that FDI may contemporaneously crowding-out domestic investment, but its impact could become positive over time. These findings are consistent with the results of Jude (2014) who demonstrates that FDI crowds out domestic investment but its impact weakens over time. The author stresses out that C-B M&A do not cause

any significant effect on domestic investment, while greenfield FDI may develop long-run complementaries with domestic investment. Adams (2009) also shows that the contemporaneous FDI has negative effect on domestic investment and subsequent positive effect in later periods.

Morrissey and Udomkerdmongkol (2012) investigate the role of institutional setting in mediating effects of FDI on domestic investment. Their findings reveal that FDI crowds out the domestic private investment and this impact is closely related to quality of institutional setup. They note negative and significant interaction effects of three governance indicators (voice and accountability, regulatory quality and control of corruption) and FDI on domestic private investment. According to their results, the extent of the crowding-out of domestic investment increases as institutional quality improves in the host country.

3. Empirical Model and Data

Following the approach of Morrissey and Udomkerdmongkol (2012) and Farla *et al*. (2016), we estimated the effect of C-B M&A on domestic investment with this form of panel model specification:

$$DI_{it} = \beta_0 + \beta_1 DI_{it-1} + \beta_2 M\,\&\,As_{it} + \beta_3 M\,\&\,As_{it-1} + \beta_4 INS_{it} + \beta_5 M\,\&\,As_{it} * INS_{it} + \beta_6^{T} CON_{it} + \varepsilon_{it} \quad (1)$$

with subscripts i and t denoting country and time, respectively, and β_0 to β_6 regression coefficients. DI_{it} represents domestic investment calculated as the difference between gross fixed capital formation and FDI inflows; DI_{it-1} is the lagged dependent variable; $M\&As_{it}$ stands for *M&As* as a percentage of GDP; $M\&As_{it-1}$ is the lagged variable; INS_{it} is institutional quality variable based on either overall institutional quality index or one of the governance indicators (defined differently in each model),while CON_{it} is a vector of investment determinants including lagged GDP growth ($Growth_{it-1}$); inflation measured by the consumer price index (CPI) (annual %) ($Inflation_{it}$) and the real interest rate ($Interest_{it}$).

We included the overall institutional quality index and separate governance indicators, aiming to distinguish their contribution to the domestic investment. Overall institutional quality index is a composite governance indicator constructed with the Principal Component Analysis method. This multivariate statistical technique was employed in order to extracts the most important elements from Worldwide Governance Indicators (WGIs) data: Voice and Accountability (VA), Political Stability and Absence of Violence (PSAV), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL) and Control of Corruption (CC). The value of indicators ranges from –2.5 to 2.5, whereas the higher number means better quality of institutional setting. The first principal component derived from these indicators helps us explain about 86% of the variations in the original six governance indicators. In addition, according to the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.90), the data is suitable for PCA. Therefore, we were able to use the first PCA component as an indicator for an assessment of the impact of institutional quality in transition countries and thus eliminate problems which could occur due to omitted-variable bias.

The governance indicators are also included in regressions one at a time in order to avoid multicollinearity between them. The complementarity between C-B M&A and the quality of institutional setting was considered by including interactions between this form of FDI and different WGIs. This data was taken from the World Bank database produced by Kaufmann and Kraay (2015). These measurements are based on expert evaluations and surveys of households and businesses related to different areas of the institutional setup. The WGIs were calculated from 1996 onwards covering over 200 countries and they are available on a two-year basis until 2002 (and an annual basis thereafter).

We applied the system Generalized Method of Moments (GMM) estimation technique in order to assess the dynamic nature of C-B M&A. The system GMM estimator helped us to reduce biased parameter estimates and the imprecision associated with other methods. GMM panel estimator is able to control for the presence of unobserved country-specific effects, as well as for a simultaneity bias caused by the potential endogeneity of the explanatory variables. System GMM estimator is used for overcoming the shortcomings of Difference GMM counterparts which occur due to short sample periods and persistent series (Blundell and Bond, 1998). Since the variables of institutional setting are highly persistent over time, the lagged levels of the series provide weak instruments for subsequent first-differences (Bond *et al*., 2001). For example, institutions are resistant to change and this applies in particular to informal institutions. These social norms are formed over a long period of time and emerged out of habits (North, 1990). Unlike the formal institutions, which could be changed relatively quickly, inherited habits require a longer period for their adaptation. System GMM estimator also allows us to capture the effects of lagged C-B M&A on current economic effects of C-B M&A. By using lagged levels in the equation, the econometric specification is changed to a dynamic panel.

We used two-step estimates in order to produce theoretically robust results and performed the 'Windmeijer correction' (Windmeijer, 2005) using Stata's 'small' command (Roodman, 2009). We considered the lagged dependent variable and C-B M&As as endogenous, with GMM-style instruments. The one-period lag of growth was included in order to avoid a potential endogeneity problem as in the study of Wang (2010), Jude (2014) and Al-Sadig (2013). The collapse option was used to reduce the size of the instruments matrix in order to obtain one instrument *per* variable instead of one instrument for each variable in each period.

The Hansen test was employed to analyse the appropriateness of the model specification and validity of overidentifying restrictions. The presence of serial correlation in the random error terms was tested in order to achieve consistent estimates of the parameters. We checked for the first and second order serial correlations of the differenced residuals. According to the Arellano and Bond (1991), there should be first-order serial correlation, but there should not be second-order serial correlation in the first-difference residuals.

For the estimation of the coefficient and the standard error of the long-run effects of C-B M&A on domestic investment we took into account the explanation given by Papke and Wooldridge (2005) and used the command 'nlcom' in STATA 12. The long-run coefficients are the product made by multiplying the estimated coefficients by the long-term

multiplier $\frac{1}{1-\beta_1}$ (where β_1 represents the estimated coefficient of the lagged dependent variable). The standard errors for these coefficients were computed using the delta-method. All the estimations were performed using xtabond2 programme written by Roodman (2009).

Data for real GDP growth, inflation as a variable for macroeconomic instability and the real interest rate was taken from the World Bank, while data on the value of C-B M&A was taken from the United Nation Conference on Trade and Development FDI database.

4. Results

The signs of the coefficients of the variables in Table 1 are largely as expected. The *p*-values of the Hansen test statistics for all specifications range from 0.598 to 0.839, which clearly indicates that the instruments are valid. In addition, we did not find evidence of second-order serial correlations. The coefficients of the lagged dependent variable have values which are less than unity suggesting the existence of the convergence process. The lagged domestic investment has positive and highly significant coefficients in all our regressions.

The estimated coefficients of current C-B M&A (in the year of merger or acquisition) are negative and statistically significant in all regressions (except in column 3). The coefficients on C-B M&A range from −1.49 to −0.74, which clearly indicates that this type of FDI crowds out domestic investment. The signs of coefficients are not surprising considering that this type of FDI involves a transfer of ownership from domestic to foreign company and does not immediately lead to an increase of its productive capacity or introduction of new or better technologies.

In the early stages of the transition process, the majority of countries (especially those from SEE and the CIS region) carried out the privatization of domestic companies, without paying too much attention to the final consequences. Economic policy makers gave priority to the advantages that FDI brings to the host country, while its negative economic effects (both short- and long-run) were disregarded. In these conditions, where the capital market and institutional framework for business continuity are not sufficiently developed, FDI inflow was possible mainly through the privatization process.

The main adverse effects of the privatization process in its initial stages are a reduction in production and an increase in unemployment due to the restructuring of existing capacities or the closing down of businesses which are incapable of withstanding competitive pressure on the domestic market. FDI is mainly directed at capital intensive businesses meaning its contribution to increasing employment rates is limited.

In addition, host transition governments implement strategies, which involve number of incentives for FDI attraction. Foreign investors are guaranteed full freedom of investment process, legal protection and security, unhindered transfer of profit, as well as national treatment and favourable legislation. The better treatment of foreign investors usually derives from the discretion of politicians and bureaucrats. Investment projects are often realized on the basis of contacts of political leaders and officials from state institutions with representatives of foreign companies. The choice of investment location depends

on the political connections and financial subsidies for job creation. The over-stimulative policies to attract FDI carry with them a great risk as they send a signal to potential investors that they do not have to base their business concept on long-run production. Namely, financial incentives were given without adequate control and were accompanied by failures in procedures. Foreign investors complied with their contractual obligations for as long as they received state subsidies. However, having benefitted as far as they could from the incentives available, they usually reduced the number of employees. In such circumstances, domestic companies are put at a disadvantage since they are faced with strong competition on the local financial market which raises the price of investment (Harrison and McMillian, 2003). The small and medium-sized enterprises (SMEs) experience difficulties in providing short-term and long-term funding sources. Mencinger (2003) stresses out that the entry of foreign investors in transition countries gave rise to monopoly which displaced domestic firms.

The direct impact of one-year lagged M&A on FDI is positive and significant in all our regressions in Table 1. The positive coefficient of lagged M&A (one year after merger or acquisition) indicates a possible crowding-in effect, as shown in the study of Wang (2010). C-B M&A contribute to an increase in domestic investment one year after their realization due to enhancement of cooperation between domestic and foreign investors, technology spillover effects, development of employees' skills and the formation of a network of SMEs involved in the activities of foreign partners. SMEs contribute to FDI inflows through business cooperation, subcontracting, franchises, and the transfer of technology. The rise in employment could be expected mainly in the mid- or long-run when company achieves a satisfactory level of profitability. In addition, domestic investment growth can be stimulated by foreign investors who, by re-investing profits, not only contribute to the expansion of existing capacities, but also to an increase in the efficiency of certain branches or sectors.

However, from the long-run perspective, the impact of this form of FDI on domestic investment proved to be negative. According to our estimates in Table 2, the coefficients of C-B M&A are negative and highly statistically significant in almost all columns (with the exception of column 3), which strongly support the fact that this type of FDI crowds out domestic investment over time. We believe that foreign investors can be led by short-term speculative interests, which have a negative impact on all aspects of economic life in host country. In addition, we cannot neglect the reverse side of FDI inflows *i.e.* negative externalities stemmed from the difference in potential growth of GDP and gross national product (GNP), especially in transition countries which are characterized as net importers of capital. The results of activities of foreign companies are not included in the calculation of country's GNP. It means, that rise in GDP does not show the real potential for the improvement of living standards in FDI recipient countries. The difference in growth rates of GDP and GNP draws attention to the issue of suitable indicator for macroeconomic performance.

Table 1 | GMM Estimates of the Effect of C-B M&A on Domestic Investment

Variables	1	2	3	4	5	6	7
***DI*(−1)**	0.574*** (0.066)	0.586*** (0.071)	0.558*** (0.061)	0.572*** (0.068)	0.553*** (0.059)	0.598*** (0.079)	0.589*** (0.075)
M&A	−1.337*** (0.226)	−1.498*** (0.390)	−0.746 (0.736)	−1.351*** (0.211)	−1.054** (0.397)	−1.483*** (0.430)	−1.444*** (0.253)
***M&A*(−1)**	0.493*** (0.136)	0.486*** (0.172)	0.450** (0.164)	0.480*** (0.143)	0.432*** (0.142)	0.484*** (0.167)	0.502*** (0.145)
***Growth* (−1)**	0.077 (0.050)	0.073 (0.048)	0.074 (0.056)	0.074 (0.052)	0.0624 (0.053)	0.084 (0.054)	0.084 (0.050)
Inflation	−0.031 (0.032)	−0.035 (0.034)	−0.004 (0.036)	−0.028 (0.033)	−0.050 (0.031)	−0.063* (0.033)	−0.050 (0.034)
Interest	−0.091** (0.038)	−0.096 (0.044)	−0.059 (0.037)	−0.086** (0.039)	−0.104*** (0.037)	−0.111*** (0.037)	−0.104** (0.038)
Overall INS	0.176 (0.200)	–	–	–	–	–	–
Overall INS* M&A	−0.131** (0.057)	–	–	–	–	–	–
CC	–	0.710 (0.815)	–	–	–	–	–
CC* M&A	–	−0.463 (0.598)	–	–	–	–	–
PSAV	–	–	2.107*** (0.448)	–	–	–	–
PSAV* M&A	–	–	−1.071 (0.724)	–	–	–	–
RL	–	–	–	0.679 (0.669)	–	–	–
RL* M&A	–	–	–	−0.675*** (0.240)	–	–	–
VA	–	–	–	–	−0.268 (0.624)	–	–
VA* M&A	–	–	–	–	−0.354 (0.220)	–	–
RQ	–	–	–	–	–	−0.133 (0.594)	–
RQ* M&A	–	–	–	–	–	0.040 (0.235)	–
GE	–	–	–	–	–	–	0.216 (0.706)
GE* M&A	–	–	–	–	–	–	−0.142 (0.210)
Time effect	yes	yes	yes	yes	yes	yes	yes
Number of observations	247	247	247	247	247	247	247
Number of groups	22	22	22	22	22	22	22
Number of instruments	14	14	14	14	14	14	14
Hansen test (*p*-value)	0.758	0.598	0.687	0.654	0.839	0.738	0.747
***AR*(1)**	0.007	0.006	0.007	0.008	0.011	0.005	0.005
***AR*(2) (*p*-value)**	0.939	0.911	0.900	0.996	0.996	0.927	0.919

Note: Numbers in parentheses are standard errors. ***, **, * indicate significance at the 1, 5 and 10% level.

Source: Author's calculations

Table 2 | The Long-Run Impact of Changes in C-B M&A on Domestic Investment

Variable	1	2	3	4	5	6	7
M&As	−3.138*** (0.738)	−3.622*** (1.285)	−1.690 (1.649)	−3.160*** (0.753)	−2.360** (1.014)	−3.694** (1.513)	−3.519*** (0.992)

Notes: Numbers in parentheses are standard errors. ***, **, * indicate significance at the 1, 5 and 10% level. The coefficients were calculated using the 'nlcom' command in Stata 12. These results are based on the columns in Table 1.

Source: Author's calculations

The one-year lagged GDP growth in Table 1 has statistically insignificant effect on domestic investment, even though the estimated coefficients have the predicted signs. We show that the higher rate of inflation and high real interest rates discourage domestic investment in the current period. While the coefficient of inflation is negative but not statistically significant (with the exception of the column 6), the impact of real interest rates proves to be negative and statistically significant in almost all our regressions.

According to our results in the first column of Table 1, the coefficient of the proxy of overall institutional quality is positive but insignificant as opposed to the coefficient of its interaction with C-B M&A, which is consistent with the findings of Farla *et al*. (2016). Our results show that the overall quality of the institutional setting negatively and significantly affects the relation between this type of FDI and domestic investment. Based on the sign and significance of this interaction term, we conclude that institutional improvements have a negative mediation effect on the relationship between C-B M&A and domestic investment activity. We believe that improvement in institutional settings has a strong impact on the attraction of foreign investors, whereas the effect of rent-seeking is more important than the influence of technology spillovers. In addition, the significant interaction effect of overall institutional quality index and C-B M&A might indicate that institutional improvements are not in line with the investment motives and expectations of foreign enterprises.

Moreover, we should be aware of the fact that a government's efforts to improve the institutional quality may also be insufficient. This problem is particularly evident when it comes to corruption. Countries in transition face systematic corruption, underpinned by the existence of collusion between financial magnates, political parties, the executive government, and the judiciary. Foreign investors are not infrequently forced to comply with conditions set down by the ruling political structures, which directly impose the business conditions on them. The majority of them are forced to abandon the idea of investing. On the other hand, it should be pointed out that this lack of transparency in the business environment can encourage certain foreign investors to undertake speculative activities, the aim of which is nothing to do with improving social well-being, but instead solely serving their business interests.

The negative mediation effect of C-B M&A and overall institutional quality index could also means that the efforts for the institutional setting improvement in its different

fields are not coordinated. This implies that there might be overlapping or even a conflict between different institutions' responsibilities. We believe that institutional reforms in different areas were not complementary to each other, which was negatively reflected on domestic investment. Therefore, the only logical solution of this problem is to provide an institutional pluralism, *i.e.* synergistic actions of all institutional structures in order to avoid possible counterfeits.

In Table 1 the coefficient of *PSAV* is highly significant and drastically higher than for other significant governance indicators. We conclude that this governance indicator is a crucial determinant of domestic investment in transition countries. The interaction effect for *PSAV* is also negative and high but not significant. It is worth noting that in column 3 the coefficient of C-B M&A is insignificant, but notably lower than in other columns. We argue that stability of the political system influences the level of foreign investors' confidence, which reflects achievements in institutional reform. Therefore, with the creation of a more stable and open political system, new investment opportunities may be available despite the crowding-out effect of FDI (Morrissey and Udomkerdmongkol, 2012). Frequent changes to laws and regulations give the impression that investment carries with it increased risk as legislation could be favourable at one point in time, while later it could render it impossible to plan business operations. Foreign investors expect to be able to have confidence in governments of countries in transition in terms of the provision of personal and property security for business continuity.

Surprisingly, the coefficients for *VA* and *RQ* are negative but not statistically significant, while other governance indicators are positive. These two indicators obviously correlate negatively with domestic investment because a government may formulate and implement policies and regulations that threaten private sector development.

Almost all the coefficients of the interaction term between the governance indicators and C-B M&A have negative signs (except for *RQ**MAs*). The high significance of the interaction terms between the *RL* and C-B M&A reflects the indirect influence on the C-B M&A-investment nexus. This negative interaction indicates that the legal system in transition countries is not enforced to stimulate investment activity, both foreign and domestic. The negative mediation effects of C-B M&A and the overall institutional quality index and *RL* on domestic investment could be explained by the fact that improving the institutional setting does not always lead to the creation of positive economic effects at the macroeconomic level as changes can bring about conditions for the inflow of speculative capital. Therefore, improvement in the quality of the institutional setting and the formation of a financial framework for FDI attraction should not become a threat to market principles and lead to the preferential treatment of non-resident investment.

Table 3 | The long-Run Effect of Changes in Institutional Quality on Domestic Investment

Variable	Long-run coefficient	
Overall INS	0.414	(0.468)
Overall INS* M&A	−0.307*	(0.158)
CC	1.717	(1.904)
CC* M&A	−1.120	(1.481)
PSAV	4.769***	(1.109)
PSAV*M&A	−2.425	(1.773)
RL	1.589	(1.542)
RL*M&A	−1.580**	(0.720)
VA	−0.601	(1.376)
VA*M&A	−0.793	(0.518)
RQ	−0.332	(1.482
RQ*M&A	0.101	(0.592)
GE	0.526	(1.717)
GE*M&A	−0.348	(0.512)

Notes: Numbers in parentheses are standard errors. ***, **, * indicate significance at the 1, 5 and 10% level. The coefficients were calculated using the 'nlcom' command in Stata 12. These results are based on the columns in Table 1.

Source: Author's calculations

According to the long-run estimates in Table 3, we find that *PSAV* and the interaction terms between C-B M&A and *RL* and overall institutional quality index exhibit a significant impact on domestic investment. The *PSAV* variable is positive and statistically significant suggesting that strengthening political governance for security and stability enhance domestic investment over time. The long-run effects of these interactions terms with C-B M&A are negative and statistically significant suggesting that there is a negative mediation effect on domestic investment in the long-run.

5. Conclusion

The issue we have addressed is whether the quality of the institutional setting has been a determinant of the economic effect of C-B M&A in 22 European transition countries in the period from 2000 to 2014. We have taken into consideration the effects of the interdependence of overall institutional quality as well as its different dimensions, and this form of FDI on domestic investment. We intended to discover the right channels through which the positive impact of C-B M&A may be transmitted to domestic

investment. Our findings suggest that contemporaneous M&A have a crowding-out effect on domestic investment, while the influence of their lagged level has a crowding-in effect. Their long-run impact is also negative and significant suggesting that foreign investors reduce the competition on the domestic market over time. Our findings are consistent with the conclusions of Jude (2014), Wang (2010) and Adams (2009), who provided evidence on the crowding-out effect of FDI on domestic investment in the current period. The authors argued that this impact of FDI weakens over time or even tends to be positive. For instance, Kosova (2010) also found that foreign entry has a negative effect on the growth and survival of domestic firms. Her findings revealed that crowding-out is a short-term or static phenomenon suggesting that initial foreign entry increases the exit rates of domestic firms.

We have shown that foreign investors may be motivated by rent-seeking interests based on the fact that the interdependence of C-B M&A and the overall quality of the institutional setting has had a negative effect on domestic investment. We have found that political stability has a positive effect on domestic investment and is the only significant variable of all the institutional factors suggesting that this governance indicator is a crucial determinant of domestic investment in transition countries. Political stability has the strongest influence on the decision of foreign and domestic companies to undertake investment, and to share and spend their resources.

The only significant interaction terms with a negative effect on domestic investment, are between C-B M&A and the Rule of Law and overall institutional quality index. These governance factors can be denoted as channels through which institutional quality may discourage domestic investment. We believe that the marked negative effect of C-B M&A outweighs the benefits achieved due to institutional change and development. The findings of other authors also give mixed results. Ours are consistent with the findings of Morrissey and Udomkerdmongkol (2012), who reported the negative mediation effect of FDI and three governance indicators (voice and accountability, regulatory quality and control of corruption) on domestic private investment. The authors asserted that this negative impact is related to quality of governance in developing countries: the extent of the crowding-out of domestic investment is higher when institutional quality improves. Farla *et al.* (2016) also pointed out that while the variable of institutional quality is positive and significant, its interaction with FDI is negative and significant.

Political Stability (positive coefficient) and the interaction terms between C-B M&A and Rule of Law and overall institutional quality index (both negative coefficients) have a significant impact on domestic investment in the long-run. Therefore, policy makers should create a strategy which will put domestic and foreign investors on an equal footing, aimed at reducing the impact of crowding-out on domestic investment. Transition countries are expected to provide foreign and domestic investors with a reliable and non-discriminatory legal framework, which will allow administrative procedures to be simplified for their business operations. Hence, it is necessary to define an adequate system of incentives, which should not threaten the principles of the market economy nor give preferential treatment to foreign investors over domestic ones. Incentive mechanisms for domestic and foreign investors would see an increase in their involvement in the economy, as well

as the level of internationally competitive value-added products and services. We believe that it is crucial to create financial incentives which would not only be aimed at particular regions, but also particular sectors. It is necessary to attract FDI to those sectors and projects which will enable the most efficient use of the country's own resources and potential, and hence stimulate the development of the domestic private sector.

Policy makers should carefully take into account those institutional dimensions whose mediation effect with C-B M&A proved to be harmful for domestic investment activity, especially in the long-run (interactions with the overall institutional quality index and Rule of Law on domestic investment). These negative effects could be explained by the fact that improving the institutional setting does not always lead to the creation of positive economic effects at the macroeconomic level as changes can bring about conditions for the inflow of speculative capital. In order to maintain the long-run positive influence of M&A on domestic investment, it is important to continue with work on improving the quality of the institutional setting with a particular focus on the interaction this type of FDI has with different indicators, above all, Political Stability and Rule of Law.

References

Adams, S. (2009). Foreign Direct Investment, Domestic Investment, and Economic Growth in Sub-Saharan Africa. *Journal of Policy Modeling,* 31(6), 939–949, https://doi.org/10.1016/j.polmod.2009.03.003

Al-Sadig, A. (2013). The Effects of Foreign Direct Investment on Private Domestic Investment: Evidence from Developing Countries. *Empirical Economics,* 44(3), 1267–1275, https://doi.org/10.1007/s00181-012-0569-1

Ashraf, A., Herzer, D. (2014). The Effects of Greenfield Investment and *M&As* on Domestic Investment in Developing Countries. *Applied Economics Letters,* 21(14), 997–1000, https://doi.org/10.1080/13504851.2014.904482

Arellano, M., Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies,* 58(2), 277–297, https://doi.org/0034-6527/91/00180277$02.00

Blundell, R., Bond, S. (1998). Initial Conditions and Moment Restrictions in Dynamic Panel Data Models. *Journal of Econometrics,* 87(1), 115–143, https://doi.org/10.1016/S0304-4076(98)00009-8

Bond, S., Hoeffler, A., Temple, J. (2001). *GMM Estimation of Empirical Growth Models.* Nuffield College, University of Oxford**.** UK Economic Papers No. W21.

Calderon, C., Loayza, N., Serven, L. (2004). *Greenfield Foreign Direct Investment and Mergers and Acquisitions - Feedback and Macroeconomic Effects.* World Bank. Policy Research Working Paper No. 3192, https://doi.org/10.1596/1813-9450-3192

Chan, C. M., Isobe, T., Makino, S. (2008). Which Country Matters? Institutional Development and Foreign Affiliate Performance. *Strategic Management Journal,* 29, 1179–1205, https://doi.org/ 10.1002/smj.705

Djarova, J. (2004). *Cross-Border Investing - The Case of Central and Eastern Europe.* Norwell: Kluvwer Academic Publishers. ISBN 978-1-4020-7985-6.

Farla, K., de Combruggher, D., Vertspagen, B. (2016). Institutions, Foreign Direct Investment, and Domestic Investment: Crowding Out or Crowding In? *World Development,* 88, 1–9, https://doi.org/ 10.1016/j.worlddev.2014.04.008

Harrison, A. E., McMillan, M. S. (2003). Does Direct Foreign Investment affect Domestic Credit Constraints? *Journal of International Economics,* 61(1), 73–100, https://doi.org/10.1016/S0022-1996(02)00078-8

Hudea, O. S., Stancu, S. (2012). Foreign Direct Investments, Technology Transfer and Economic Growth: A Panel Approach. *Romanian Journal of Economic Forecasting,* 15(2), 85–102.

Jude, C. (2014). *Does FDI Crowd out Domestic Investment in Transition Countries,* mimeo.

Kamaly, A. (2014). Does FDI Crowd in or out Domestic Investment? New Evidence from Emerging Economies. *Modern Economy,* 5(4), 391–400, https://doi.org/10.4236/me.2014.54038

Kaufmann, D., Kraay, A. (2015). *The Worldwide Governance Indicators Database.* Available at: http://info.worldbank.org/governance/wgi/index.aspx#home

Kosova, R. (2010). Do Foreign Firms Crowd Out Domestic Firms? Evidence from the Czech Republic. *Review of Economics and Statistics,* 92(4), 861–881, https://doi.org/10.1162/REST_a_00035

Kostovc, Č., Redek, T., Sušjan, A. (2007). Foreign Direct Investment and Institutional Environment in Transition Economies. *Transition Studies Review,* 14(1), 40–54, https://doi.org/ 10.1007/s11300-007-0140-5

Lipschitz, L., Lane, T., Mourmouras, A. (2001). *Capital Flows to Transition Economies: Master of Servant?* IMF. Working Paper No. 02/11, https://doi.org/10.5089/9781451842791.001

Mencinger, J. (2003). Does Foreign Direct Investments Always Enhance Economic Growth? *Kyklos,* 56(4), 491–508, https://doi.org/10.1046/j.0023-5962.2003.00235.x

Morrissey, O., Udomkerdmongkol, M. (2012). Governance, Private Investment and Foreign Direct Investment in Developing Countries. *World Development,* 40(3), 437–445, https://doi.org/10.1016/j.worlddev.2011.07.004

Munemo, J. (2014). *Business Start-up Regulations and the Complementarity between Foreign and Domestic Investment.* Perdue School of Business, Salisbury University, 1–25.

North, D. (1990). *Institutions, Institutional Change and Economic Performance.* Cambridge: Cambridge University Press. ISBN 978-0521397346.

OECD (2007). *International Investment Perspectives 2007: Freedom of Investment in a Changing World.* Paris: Organization for Economic Cooperation and Development.

Ovin, R., Maček, A. (2010). How Beneficial Are Inward C-B M&A for European Countries. *European Journal of International Management,* 4(5), 488–505, https://doi.org/10.1504/EJIM.2010.034963

Papke, L. E., Wooldridge, J. M. (2005). A Computational Trick for Delta-Method Standard Errors. *Economics Letters,* 86(3), 413–417, https://doi.org/10.1016/j.econlet.2004.07.022

Pinto, P. M., Zhu, B. (2009). Fortune or Evil? The Effect of Inward Foreign Direct Investment on Corruption (June 23), International Studies Quarterly, Vol. 60, No. 4, https://doi.org/10.2139/ssrn.1324750

Rojec, M. (2005). Balance of Privatization Policies Related to Foreign Direct Investment in the Transition Countries of Central and Eastern Europe. Papeles del Este, Universidad Complutense de Madrid*,* Vol. 10.

Roodman, D. (2009). How to do Xtabond2: An Introduction to "Difference" and "System" GMM in Stata. *Stata Journal,* 9(1), 86–136.

UNCTAD (1999). *World Investment Report 1999: Foreign Direct Investment and the Challenge of Development.* New York and Geneva: United Nations Conference on Trade and Development.

Wang, M. (2010). Foreign Direct Investment and Domestic Investment in the Host Country: Evidence from Panel Study. *Applied Economics,* 42(29), 3711–3721, https://doi.org/10.1080/00036840802314580

Windmeijer, F. (2005). A Finite Sample Correction for the Variance of Linear Efficient Two-step GMM Estimators. *Journal of Econometrics,* 126(1), 25–51, https://doi.org/10.1016/j.jeconom.2004.02.005