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SUSTAINABILITY OF CORPORATE TAX REVENUES IN EUROPEAN OECD ECONOMIES: EATR CUTS AND FDI INFLOW[1]

Abstract: Base erosion and profit shifting (BEPS) is an endeavor to prevent increased profit shifting as a result of global tax competitiveness. However, there is still a scarcity of thorough analyses that quantify BEPS effects on the economy, tax revenues, employment, and welfare. This paper's main objective is to empirically evaluate the direct effect of EATR changes and indirect effect through FDI on the corporate tax revenue (CTR) in European OECD countries using available empirical data in the period 1998–2021. The paper analyses volume of capital/profit shifts which reflect tax revenues loses in some economies due to heterogenous tax policies within the EU. Using the (Pooled) Mean Group model a significant positive long-term relationship was confirmed between the CTR and the EATR; and between CTR and FDI. The Dynamic Common Correlated Effects (DCCE) model was implemented as a robustness check, and it confirms results revealed with PMG model in short-run. The findings show that on average in European OCED economies achieving tax competition leads to tax revenue loss. On the other hand, FDI increase creates positive effect on CTR. Furthermore, results show that completely different strategies exist in emerging vs developed European OECD economies – in terms of attracting FDI vs maintaining sustainable the level of tax revenues.

Keywords: EATR, corporate tax revenues, European OECD economies, PMG model, DCCE model.

1. INTRODUCTION

Fighting corporate tax evasion and tax avoidance has long been a top priority for the governments of the European Union (EU) and the Organization for Economic Coordination and Development (OECD). Specifically, the activities of multinational corporations (MNCs) have raised concerns in recent years regarding their aggressive tax evasion approaches; profit-shifting results from MNCs utilizing different tax laws, loopholes, and inconsistencies across national tax systems. To date, individual governments have responded to the increasing tax revenue mobility across borders by lowering corporate tax rates in a downward spiral. Consequently, countries have been lowering their tax rates to zero with the aim to draw in foreign direct investment (FDI) and encourage GDP growth (Glavaški et al. 2022). Such tax strategies could jeopardize public finances, creating spillover effects by profit shifting and eroding tax bases in particular economies (Beljić et al. 2023). The effective average tax rate (EATR), which considers all tax incentives, is often used to achieve tax competition rather than the statutory tax rate. As a result, the OECD initiated an action against base erosion and profit shifting (BEPS) to achieve tax coordination among OECD, EU and G7 economies. 15% global minimum effective average tax rate on incomes is one of the key elements of the reform, which was ratified by more than 135 countries in October 2021. On the other hand, the level of EATR is important not only for FDI attraction, but also for determination of corporate tax revenues, which could be negatively affected by EATR lowering.

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Policymakers' interest in quantifying BEPS is growing, however there is still not enough of a thorough analysis that considers all the way that BEPS affects the economy, tax revenues, jobs, and welfare. Due to the complexity of the international tax system and the relationships it entails across all nations, evaluations should pay special attention to the various ways that corporate tax evasion, corporate investment, and total economic activity interact. Although BEPS is intended to mitigate the negative consequences of profit shifting caused by disparate tax regimes throughout the world, it may have unfavorable implications on some economies. The specific interest of this paper is to analyze the effects of BEPS implementation in European OECD economies, with a special emphasis on the tax strategies of both developed and emerging economies. More detailed, the question is in which economies decrease of EATR will directly diminish the corporate tax revenues, or the capital inflow will be enough to foster economic growth and maintain tax revenues sustainable.

This paper's main objective is to empirically evaluate the direct effect of EATR changes and indirect effect through FDI on the corporate tax revenue (CTR) in European OECD countries using available empirical data in the period 1998–2021. European OECD economies were selected since the OECD and EU are the main advocates of BEPS. The paper analyses volume of capital/profit shifts which reflect in tax revenues loses in some economies due to heterogenous tax policies within EU. Although fiscal coordination exists in EU economies, de facto fiscal sovereignty leads to diversity in implementation of tax policies. The sample may thus be classified into two subgroups: developed European OECD economies and emerging European OECD economies[2]. These goals are analyzed in the framework of cross-sectional dependent, non-stationary, heterogeneous panels, using the (Pooled) Mean Group (PMG/MG) estimator to reveal the long-run relationship between the EATR, FDI and CTR, as well, heterogeneous error-correction parameters. Robustness check is implemented using Dynamic Common Correlated Effects estimator.

Hypothesis 1 (H1): *Long-run equilibrium relationship exists between effective average tax rates, foreign direct investments, and corporate tax revenues in the sample of 22 European OECD economies in the period 1998-2021.*

Hypothesis 2 (H2): *The speed of adjustment to the long-run relationship and key variables differs in groups of emerging/developed European OECD economies, i.e. different strategies for FDI attraction are used.*

The remainder of the paper is organized as follows. After the Introduction section, in Section 2 the empirical literature's current evidence is reviewed. Section 3 shows empirical evidence of EATR, FDI and CTR trends in analyzed period in European OECD economies. Section 4 discusses estimation results, while Section 5 is dedicated to robustness check. The last part of the paper outlines the concluding remarks.

2. LITERATURE REVIEW

The literature consulted in this paper addresses one of the primary effects of globalization—increasing capital mobility—which European policymakers have identified as an important issue. Matthews (2011) notes that countries cannot ignore the potential effects regarding how their tax rates compare to other economies' rates on investment in a globalized world faced with high levels of capital mobility. More specifically, economies must consider the effective average tax rates, which account for various aspects of the tax base as well as the likelihood and magnitude of aggressive tax planning (Bénassy-Quéré et al. 2005; Barrios et al. 2014;). Exbrayat (2016) noted that designing tax systems across the EU could be challenging due to two opposite factors. Namely, on the one side national governments in developed and more populous countries tend to set higher corporate tax rates due to higher real market potential, however, on the other side trade liberalization has resulted in significant tax interactions that have pushed down corporate tax rates (especially EATR) in European countries. That is in accordance with Thanh & Canh (2020) which suggest that developed countries have the ability to maintain or increase the corporate tax rate in order to improve corporate income tax revenue, while in emerging economies, capital accumulation decreases. Mardan and Stimmelmayr (2020) demonstrate that the capacity of multinational corporations to shift profits is a critical factor in determining a nation's optimal taxation. Their several findings correspond with the real trends in corporate income tax rate setting that have been observed throughout emerging and developing economies. The results explain the trends in corporate income tax rates across economies differing in levels of development (Milton 2017; Matthews 2011; Van Ganzen 2023). Furthermore, they demonstrate that countries' absolute risk level is determined by tax rate strategies due to costs of profit shifting.

An important aspect of this paper is implementation of proposed BEPS and its effects. The implementation of BEPS is a worthy goal for tax systems as it removes the pressures of tax competition. In the absence of tax competition, countries can compete based on economic fundamentals that are far too frequently ignored, such as investments in public infrastructure, research and development, and human capital formation (Clausing, 2021). According to Tørsløv et al. (2020), if every nation had a uniform effective corporation tax rate, global revenues and investment would remain unchanged, but corporate profits would shift in location. In the high-tax nations of the European Union, profits would rise

[2] Analyzed European OECD economies are categorized in two groups: 1) developed economies: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden; 2) emerging economies: Czech, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia, Slovakia.

by around 15%, in the US, by 10%, and in today's tax havens, by 60%. Van de Vijver et al. (2020) emphasize that active tax planning has become a sustainability issue, since governments must deal with lower tax revenue, which is critical for achieving sustainable development goals. However, the authors demonstrated that OECD and EU authorities' measures against aggressive tax planning, such as the Action Plan against BEPS, are ineffective, hence aggressive tax planning remains widespread. Furthermore, Cantos (2022) notes that neither the successful implementation of a minimum tax rate of 15% in corporate tax nor a considerable reduction in the advantages transmitted to tax havens are anticipated. Riccardi (2021) acknowledges the necessity for a coordinated tax response, but she argues that in building this solution, attention should be paid to distinctive traits and policy preferences demonstrated by emerging economies.

Given that there are conflicting opinions in the literature and that there is a lack of scientific research that would confirm the effects of BEPS implementation in developed versus emerging economies, the authors of the paper considered this research a necessary contribution to the existing literature. Gropp and Kostial (2001) shows that tax harmonization as policy for elimination of harmful tax effects could have different effects on high-tax economies in comparison to low-tax economies. Namely, high-tax nations would gain from harmonization while low-tax countries would lose revenues in response to changes in FDI flows. Furthermore, Álvarez-Martínez et al. (2022) demonstrate that a more thorough evaluation of the scope of BEPS and its effects on tax revenues and the overall economy is thus necessary. Their thorough country-by-country analysis also demonstrates that profit shifting may benefit or negatively impact nations. In general, BEPS mostly affects nations with high corporate income tax rates and substantial FDI stocks. When the global minimum tax rate is high enough to stop profit shifting, the welfare effect is unquestionably positive. However, the analysis indicates the risk of introducing a global minimum tax at a low rate since profit shifting persists and havens maintain part of the global revenue gain due to the policy (Johannesen, 2022). Mosquera Valderrama et al. (2018) highlighted source/residence that bias in the prevalent OECD models and power imbalances in double tax treaties are two significant tax issues that emerging economies face, and they are not addressed by the existing BEPS framework. Thus, most emerging economies face a trade-off: maintaining public revenue level or attracting foreign direct investment and economic growth.

3. TREND IN EATR, CTR, AND FDI

The race to the bottom trend of effective average tax rate is unquestionable worldwide. Cutting taxes is the result of the fact that a competitive EATR was recognized as a stimulator for FDI inflow. OECD economies, especially European economies reduced EATR on average 9% (from average value of EATR 28.8% to 19.8%, Figure 1). Achieved average value is far away from defined level of global minimum rate of EATR (15 %), since developed economies decreased EATR only to 22.8% in average in 2021. However, if the analysis is based only on emerging European OECD economies, the situation is different since the average value is almost 15%. EATR was decreased in emerging economies from average value 25.43% in 1998 to 15.06% in 2021, while some emerging economies proposed EATR on the even lower level (Estonia: 10.2% in 2021, Hungary: 11.1% in 2021, Lithuania 12.7% in 2021). Since that those economies have broken the bottom value of 15%, the question is how the introduction of global minimum tax rate as obligatory rule would affect those economies, and generally how declining trend of EATR affect sustainability of corporate tax revenues. According to Figure 1, the trend of EATR decline corresponds to corporate tax revenues decline (from average value 7.77% to 6.51% of GDP in 2020). More detailed, in the group of emerging economies CTR declined from 6.48% in 1998 to 5.69% in 2020, and in group of developed economies from 8.7% to 7.7% of GDP.

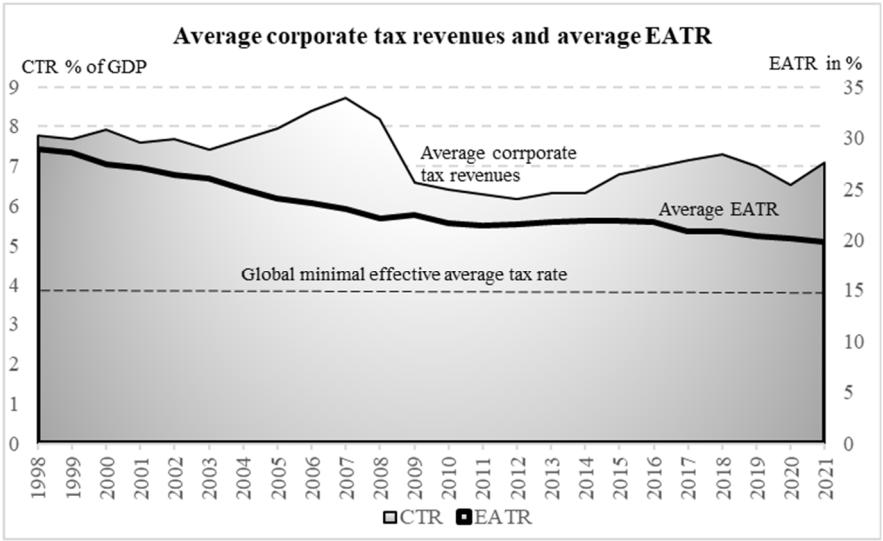

Figure 1: Average CTR, average ETAR and global minimum rate of EATR in European OECD economies
Source: Authors.

According to the former analyses it seems that emerging European OECD economies strategy is providing FDI inflow via EATR reduction, namely, trying to affect FDI indirectly. On the other hand, developed European OECD economies use this strategy less, since those economies are oriented towards direct influence on FDI, providing other type of investments: investments in public infrastructure, research and development, human capital formation. Therefore, fluctuation of FDI in European OECD economies is huge during the analyzed period, taking into consideration the period of economic boom and recessions, as well as heterogeneous sample (Figure 2). Namely, higher levels of FDI are mostly oriented toward developed economies, however, in 2004-2006, just after joining the EU, FDI was very oriented in a higher level in emerging economies. Different strategies in attraction of FDI result in diverse effect on corporate tax revenue sustainability, indicating that a more subtle econometric analysis is needed.

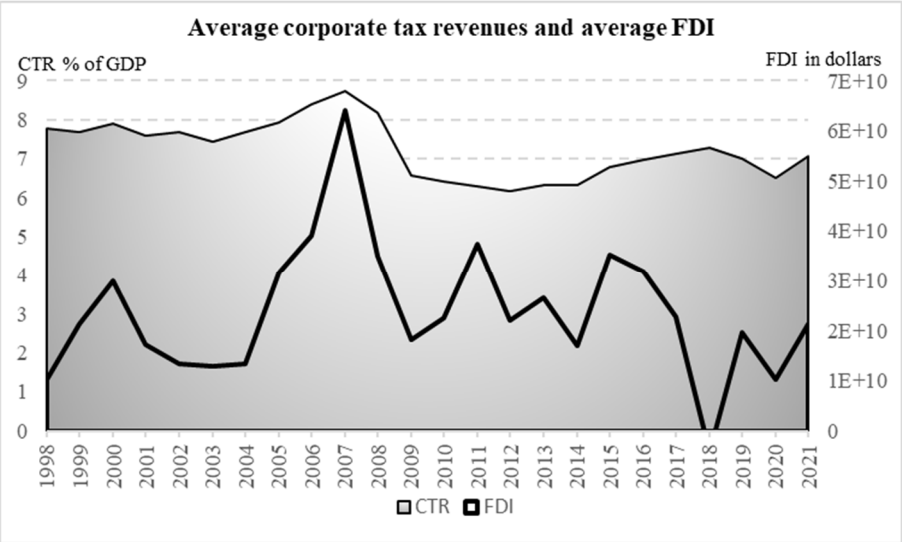

Figure 2: Average CTR and average FDI in European OECD economies
Source: Authors.

4. EMPIRICAL RESULTS AND DISCUSSION

The analysis is based on a panel data econometric framework, which allows the investigation of the long-run relationship between CTR, EATR, and FDI in European OECD economies (Hypotheses (H1)). Considering the sample analyzed, the longest possible period 1998–2021 (T=23), due to due to the availability of data related to the EATR, for the 22 European OECD economies (N=22), firstly, cross-sectional dependence (CSD) in the panel is tested. The results of the Pesaran CD test are presented in Table 1 (panel a) and simultaneously represent analysis related to Hypothesis (H1) (for CTR, EATR, and FDI) implying that the null hypothesis of cross-section independency must be rejected for the variables EATR, CTR and FDI (Table 1, panel (a)).

Table 1: Pesaran CD test, Pesaran CIPS test and Westerlund cointegration test

Variables	Pesaran CD Test (a)	*p*-val.	Lag	Pesaran (CIPS) test in the level (b)	*p*-values	Pesaran (CIPS) test - first differences (b)	*p*-values	Westerlund Cointegration Test (c)		*p*-values
Sample: 22 European OECD economies; period 1998-2021										
CTR	13.95	0.000	0	-1.266	0.103	-17.097	0.000	Pt	-7.256	0.000
			1	-0.363	0.358	-9.226	0.000			
			2	0.693	0.756	-6.492	0.000			
EATR	37.97	0.000	0	-0.476	0.317	-14.893	0.000	Pa	-4.067	0.007
			1	-1.772	0.038	-5.461	0.000			
			2	-1.434	0.076	-4.181	0.000			
FDI	12.43	0.000	0	-7.302	0.000	-20.515	0.000			
			1	-1.479	0.070	-15.785	0.000			
			2	1.723	0.958	-5.533	0.000			

Source: Authors based on Stata 15.

Due to the CSD test results, the Pesaran CIPS test (2007), a second-generation panel unit root test, is utilized, allowing CSD. Unit root tests do not reject the null hypothesis of non-stationarity, which means that the variables CTR and EATR are non-stationary, as well as the variable FDI. After that, the stationarity of the first differences was tested, and the results show that all variables are stationary (Table 1, panel (b)). Due to the existence of CSD, a robust version of Westerlund's test is used to test cointegration between variables CTR, EATR and FDI. According to the Westerlund test results the alternative hypothesis of cointegration is accepted for both models (Pt and Pa), and the null hypothesis of no cointegration is rejected (Table 1, panel (c)).

Table 2: PMG and MG estimator results for European OECD economies in the period 1998-2021 (homogeneous coefficients)

Sample: 22 European OECD economies; period 1998-2021					
Dependent variable: CTR		Long-Run Equilibrium (θ)		Error-Correction (Φi)	
		Coef.	*p*-value	Coef.	*p*-value
MG	**EATR**	0.0831	0.370	-0.9920	0.000
	FDI	4.72	0.131		
PMG	**EATR**	0.1062	**0.001**	-0.978	0.000
	FDI	4.90	**0.000**		
Hausman test statistic		**0.8126**		**0.000**	

Source: Authors based on Stata 15.

Homogeneous coefficients in the model estimated by PMG and MG are shown in Table 2. In the case of PMG, the long-run relationship between CTR, EATR, and FDI is estimated, while error-correction vector is significant, negative and between 0 and 1, confirming cointegration relationship. Positive significant relationship is expected since changes in state tax bases influence tax revenues. Namely, governments wishing to increase FDI by using tax credits or generous depreciation allowances to encourage investment, could result in significant corporate tax revenue decline (Suárez Serrato and Zidar, 2018). Thus, long-run cointegration relationship is significant, EATR cuts lead to CTR decreasing, as well as FDI decrease causes CTR drops, while EATR cuts affects FDI inflow. Therefore, it could be concluded that reduction in the EATR leads to a decrease in CTR inflows, while reduction of FDI leads to a decrease in CRT inflows, and vice versa. Error-correction coefficients show fiscal adjustment - about 97.8 % of deviations from long-run equilibrium relationship are corrected in one year according to PMG method, in case of MG method 99.2 % of deviations are corrected. However, using the Hausman test, the PMG model was revealed to be more efficient, and thus the dynamics of the heterogeneous adjustment coefficient was analyzed using the PMG model. Therefore, heterogeneous adjustments coefficients will be analyzed using PMG estimator with heterogeneous coefficients (Table 3).

Table 3: PMG estimator results for European OECD economies in the period 1998-2021 (heterogeneous coefficients)

Sample:	**22 European OECD economies; period 1998-2021**					
	Dependent variable: CTR					
PMG Estimator	Error-correction (Φi)		**ΔEATR**		**ΔFDI**	
Emerging European OECD economies	Coef.	*p*-value	Coef.	*p*-value	Coef.	*p*-value
Czech	-0.7574	0.000	-0.013	0.889	**-3.53**	**0.018**
Estonia	-0.74180	0.000	-0.0494	0.682	**-6.00**	**0.002**
Latvia	**-0.9608**	**0.000**	**0.0846**	**0.027**	5.02	0.905
Lithuania	-0.6486	0.002	0.0314	0.648	-2.28	0.473
Hungary	-0.667	0.000	-0.0453	0.365	**-3.21**	**0.006**
Poland	-0.898	0.000	-0.0207	0.669	**-4.13**	**0.010**
Slovenia	**-0.9472**	**0.000**	**-0.0276**	**0.050**	-6.47	0.763
Slovakia	-0.8231	0.000	0.030	0.424	**-3.74**	**0.019**
Developed European OECD economies						
Austria	-1.310637	0.000	0.00377	0.996	**-6.38e**	**0.002**
Belgium	**-0.8554**	**0.000**	**0.00337**	**0.048**	**-4.17e**	**0.000**
Denmark	-1.247	0.000	0.1337	0.385	**-6.03**	**0.004**
Finland	-1.111	0.000	0.0195	0.839	**-5.08**	**0.007**
France	-1.245	0.000	-0.0424	0.312	**-5.98**	**0.003**

Germany	-1.098	0.000	0.0064	0.864		**-5.36**	**0.002**
Greece	-1.137	0.000	-0.1215	0.036		6.76	0.879
Ireland	**-0.801**	**0.000**	0.139	0.556		**-3.84**	**0.002**
Italy	-1.090	0.000	-0.0078	0.894		**-5.39**	**0.000**
Luxembourg	**-0.8317**	**0.000**	**0.2088**	**0.064**		**-4.09**	**0.002**
Netherlands	-1.085	0.000	-0.0259	0.084		**-5.31**	**0.004**
Portugal	-1.079	0.000	-0.1170	0.016		**-5.74**	**0.001**
Spain	-1.1578	0.000	-0.0177	0.793		**-5.51**	**0.005**
Sweden	-1.038	0.000	-0.0012	0.989		**-5.11**	**0.005**

Source: Authors based on Stata 15.

Heterogeneous panels' primary advantage is the estimates of each European OECD economy in the context of error-correction parameters. The correction of the equilibrium error (Table 3), which indicates adjustments towards long-term equilibrium is significant and negative in all emerging European OECD economies: Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia, Slovakia, while in developed European OECD economies: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, error-correction is significant but greater than 1, indicating overcorrection. Those completely different effects in emerging and developed European OECD economies indicate that predominantly emerging economies uses tax strategy of EATR reduction in order to attract FDI with expected negative results on CTR, while this strategy is not present in the group od developed economies. Reduction of EATR is not framework for tax strategy in developed economies to achieve FDI influx. Moreover, in the analyses of EATR and FDI effects on CTR, it could be noticed that EATR is not significant variable in developed economies (EATR is not significant variable in developed economies (except in Belgium, Greece, Luxemburg, and Portugal), while FDI effect is present in all developed economies (except Greece). The mentioned result indicates that developed European economies focus FDI directly, not via EATR reduction as emerging European OECD economies. Emerging European OECD economies combine reduction of EATR in order to increase FDI, since both variables are significant. Therefore, emerging economies are more exposed to risk in context of their budget sustainability. Specifically, heterogeneous coefficient of error-correction could be explained as follows:

(a) In the group of emerging economies, the highest coefficients are present in Latvia and Slovenia, which indicates that in those emergent open economies there is a rapid adjustment towards equilibrium (96.8% and 94.7%, respectively). In the group of emerging economies, only in Latvia and Slovenia EATR influence is significant. Namely, analyzing the impact of reducing EATR on CTR in Latvia, it can be concluded that achieving tax competitiveness is at the expense of reducing CTR (Mosquera Valderrama et al. 2018), as it is indicated by the positive relationship between EATR (decrease in EATR from 22.7% to 16.7%) and CTR (decrease in CTR from 6.97% to 2.74%). However, the reduction of EATR in Slovenia enables the growth of CTR due to the negative relationship of the analyzed variables. Namely achievement of tax competitiveness (reduction of EATR from 20.9% to 17.3%), in Slovenia, ensures the CTR increases (growth of CTR from 2.58% to 5.17%).
(b) In other emerging European OECD economies (Czech Republic, Estonia, Hungary, Poland, and Slovakia) focus is on FDI variable, instead on EATR, showing that direct effect between FDI and CTR is present.
(c) In the group od developed economies, the highest coefficients are present in Belgium and Luxembourg (85.5% and 83.1%; respectively). The EATR reductions, in these economies, made the tax competitiveness increase (from 34.5% to 23.2% in Belgium; from 32.6% to 21.8% in Luxembourg), however, it put public revenues at risk and resulted in lower corporate income tax revenue (from 40.17% to 29.5% in Belgium; from 37.4% to 24.9% in Luxembourg). Thus, EATR reductions were not enough to stop the tax revenue spillover into the EU members with lower EATR rates (Johannesen, 2022).
(d) Other developed economies do not use reduction of EATR as framework for their tax strategy since that those economies focus FDI directly.

Given the results presented it could be concluded that emerging economies are much more sensitive to tax base changes (EATR) in contest of tax revenue levels, since their strategy is predominantly oriented toward EATR reduction to increase FDI. Hence, EATR adjustments towards proposed BEPS minimum could jeopardize their tax revenue even more creating budget deficits. However, it is necessary to explore short-term and long-term relationship between CTR and EATR for clearer conclusion on EATR influence on CTR.

5. ROBUSTNESS CHECK

Due to some limitation of PMG method when cross-section dependece is present in the model, we checked robustness of estimates using different method. Namely, additional estimaton was conducted by Ditzen (2018) Dynamic common correlated effects (DCCE) method (Table 4) since that method includes cross-sectional dependence. In Table 4, the results of the tested model show that there is no cross-sectional dependence (Pesaran, 2021). Furthermore, homogeneous parameters are presented, in the short and long-run. According to homogenous parameters, lagged value of dependent variable is significant, while EATR lowering has positive effects on CTR in the short run, and FDI influence positively on CTR, which is in accordance with the PMG estimation results. Moreover, in the long run the negative relationship between EATR and CTR was revealed by DCCE, which is confirmation of some heterogenous results shown from PMG for certain European OECD economies. Influence of FDI influx on CTR is positive in long run, as well.

Table 4. DCCE estimator results for homogenous coefficient for European OECD economies in the period 1998-2021

Sample:	**22 European OECD economies; period 1998-2021**				
Dependent variable: CTR					
Short-run			**Long-run**		
DCCE	Coef.	*p*-value	**DCCE**	Coef.	*p*-value
Lag_CTR	-0.732	0.080	**EATR**	**-4.296**	**0.035**
EATR	**0.453**	**0.042**	**FDI**	**3.40**	**0.028**
FDI	**2.65**	**0.041**	**Adjustment term**		
Lag_EATR	-0.296	0.062			
Lag_FDI	-2.051	0.063	**LR_CTR**	-1.732	0.000
CSD Pesaran Xie CD*	0.24	0.813			

Source: Authors based on Stata 15.

Conclusions related to robustness check using other method are: (1) the same variables – EATR and FDI, with the same sign, significantly determine CTR, as in case of previously applied PMG method in short-run, (2) while in long-run EATR has different (negative) sign showing that tax competition could be beneficial for some European OECD economies, which should be investigated in more detailed in future research.

6. CONCLUSION

Considering current unsustainable circumstances, European OECD economies face the enormous challenge of maintaining stable public revenue sustainable. On the one hand, for decades national governments opt for competing tax strategies in order to attract FDI. Race down to zero is a common strategy for emerging EU economies, particularly. EU economies. However, this tax approach could jeopardize tax revenues and consequently lead to gaining budget deficits and high public debt. Namely, due to the globalized world and common market within EU, capital is highly mobile, which ensures multinational corporations to shift their profit bases easily. This is an especially important issue in terms of geo-political crisis across the world. As response to escalating problem, OECD in coordination with EU offered BEPS and proposed minimum global EATR. Thus, the main goal of BEPS is to stop or at least decrease tax revenue shifting within economies. The special interest of the paper was the examination of the long-term relationship when crisis years are included in the model. The special interest of the paper was the examination of the long-term relationship between CTR, EATR, and FDI. The paper's main findings are: (a) the results of dynamic panel models (PMG model) on a sample of 22 European OECD economies in the period from 1998-2021 confirm the existence of a long-term positive relationship between the CTR and the EATR; and between CTR and FDI. Namely, in the EU average, a reduction in the EATR leads to a decrease in CTR inflows by 1.09%. Therefore, the findings show that on average in European OCED economies achieving tax competition leads to tax revenue loss. On the other hand, FDI increase creates positive effect on CTR. (b) Completely different strategies exist in emerging vs developed European OECD economies - emerging economies uses tax strategy of EATR reduction in order to attract FDI with expected negative results on CTR, while this strategy is not present in the group od developed economies – those economies focus FDI directly, not through EATR reduction. (c) Emerging economies are much more sensitive to tax base changes (EATR) in contest of tax revenue levels compared to developed European OECD economies. The highest speed of adjustment towards equilibrium is higher in emerging economies – Latvia and Slovenia (96.8% and 94.7%, respectively) than in Belgium and Luxembourg (85.5% and 83.1%; respectively). (d) In Latvia, positive relationship between CTR and EATR was revealed, meaning that EATR cuts leads to CTR decrease, however, as results showed, achieving tax competitiveness in Slovenia ensured gaining tax revenues on corporate profits. (e) Even though developed counties cut their EATR, the tax revenue spillover to tax competitive

economies is still present. (e) The Dynamic Common Correlated Effects model was implemented as a robustness check since that method includes cross-sectional dependence. The DCCE model confirmed the conclusions based on the PMG model in relation to the short-run relationship between CTR and EATR, and between EATR and FDI.
To summarize, from the results shown policy makers are facing a tradeoff between tax competitiveness and sustainable tax revenues, since down to zero race could jeopardize tax revenue. However, in some European OECD economies (Slovenia), lowering EATR increased tax revenues, which could be explained by EATR low enough to attract profits the other EU economies. Namely, in order to stop profit shifting and eroding tax bases the global minimum tax rate is high, , and the question is whether the proposed minimum is high enough.

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