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GLOBALIZATION AND TAX COMPETITION IN CENTRAL ASIAN COUNTRIESAsst. Prof., PhD **Abdieva Raziakhan** <abdievarasiya@gmail.com>Asst. Prof., PhD **Baigonushova Damira** <damira.baigonushova>

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Abstract

Higher mobility of capital and labor during the age of globalization has led to tax competition between countries. After the collapse of the USSR, with the liberalization of economies, all post-Soviet countries faced the globalization process. Post-Soviet countries adopted tax law in a short period and during transition reduced tax rates, especially rates of corporate tax and income tax. This paper analyzes the level of tax competition in selected Central Asian countries as Kyrgyzstan, Kazakhstan, and Uzbekistan by implementing Clemente-Montano-Reyes Unit Root Test. Foreign yearly direct investment inflow data and corporate tax rate between 1992-2017 was used. Empirical results showed that tax reforms cause an effect on the level of foreign direct investment inflow in all three countries. But, along with this, ensuring economic development and stability could have a more significant effect on the inflow of foreign direct investment.

JEL Codes: F21, H25, K34

Keywords: foreign direct investment; tax policy; tax competition; Central Asia.**ГЛОБАЛИЗАЦИЯ И НАЛОГОВАЯ КОНКУРЕНЦИЯ
В СТРАНАХ ЦЕНТРАЛЬНОЙ АЗИИ****Абдиева Разияхан**, исполняющая обязанности доцента, PhD <abdievarasiya@gmail.com>**Байгонушова Дамира**, исполняющая обязанности доцента, PhD <damira.baigonushova>

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Аннотация

Более высокая мобильность капитала и рабочей силы в эпоху глобализации привела к налоговой конкуренции между странами. После распада СССР, с либерализацией экономики, все постсоветские страны столкнулись с процессом глобализации. Постсоветские страны за короткий период приняли налоговое законодательство и в переходный период снизили налоговые ставки, особенно ставки корпоративного налога и подоходного налога. В данной статье анализируется уровень налоговой конкуренции в отдельных странах Центральной Азии, таких как Кыргызстан, Казахстан и Узбекистан, путем применения теста Клементе-Монтано-Рейеса. Были использованы ежегодные данные о притоке прямых иностранных инвестиций и ставке корпоративного налога в период с 1992 по 2017 год. Эмпирические результаты показали, что налоговые реформы влияют на уровень притока прямых иностранных инвестиций во всех трех странах. Но, наряду с этим, более существенное влияние на приток прямых иностранных инвестиций могло бы оказать обеспечение экономического развития и стабильности.

Ключевые слова: прямые иностранные инвестиции; налоговая политика; налоговая конкуренция; Центральная Азия.

**ГЛОБАЛИЗАЦИЯ ЖАНА ОРТО АЗИЯ ӨЛКӨЛӨРҮНДӨ САЛЫКТЫК
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Кыскача мүнөздөмө

Глобализация мезгилинде капиталдын жана жумушчу күчтүн жогорку мобилдүүлүгү өлкөлөр ортосунда салыктык атаандаштыкка алып келди. СССРдин таркалуусу менен бардык постсоветтик өлкөлөр экономикалардын либералдашуусуна жана глобалдашуу процессине туш болушту. Постсоветтик өлкөлөр кыска мөөнөттүн ичинде салык мыйзамдарын кабыл алышкан жана өткөөл мезгилде салыктын ставкалары, өзгөчө пайда жана киреше салыгынын ставкалары төмөндөтүлгөн. Бул макалада Клементе-Монтано-Рейс Unit Root Testтин колдонуу аркылуу Борбордук Азиянын Кыргызстан, Казакстан жана Өзбекстан сыяктуу өлкөлөрүндөгү салыктык атаандаштыктын деңгээли талданат. 1992-2017-жылдар аралыгында өлкөгө келип түшкөн тике чет өлкөлүк инвестициялардын жылдык маалыматтары жана пайда салыгынын ставкасы колдонулган. Эмпирикалык натыйжалар салык реформалары үч өлкөдө тең чет өлкөлүк түз инвестициялардын деңгээлине таасирин тийгизээрин көрсөттү. Бирок муну менен катар эле, экономикалык өнүгүүнү жана туруктуулукту камсыз кылуу тике чет өлкөлүк инвестициялардын агымына таасири маанилүү экендигин белгилеп кетүү керек.

Негизги сөздөр: чет өлкөлүк тике инвестиция; салык саясаты; салыктык конкуренция; Борбордук Азия.

1. Introduction

Higher mobility of capital and labor during the age of globalization has led to tax competition between countries. Tax competition caused both developed and developing countries to shift the tax burden from capital to labor. During this process tax rates of corporate tax are decreasing, while they provide tax incentives. Such a policy would have a two-sided effect on the economy: positively, if foreign direct investment inflow increases and brings together technology and innovation. Also, it may harm the national economy by diminishing tax revenues and social expenditure.

After the collapse of the USSR, with the liberalization of economies, all post-Soviet countries faced the globalization process. The transformation from a planned economy to a market economy was hard and accompanied by severe crises. High mobility of goods and capital required immediate decisions to adjust the tax system to the conditions of globalization. Post-Soviet countries adopted tax law in a short period and during transition reduced tax rates, especially rates of corporate tax and income tax. But not in all transition countries this tax policy was successful to attract direct foreign investments.

Tax competition is the process by which governments attempt to attract capital and labour to their country by offering low tax rates or other tax incentives. During past 40 years most developed and developing countries had reduced corporate tax rates with the purpose of attracting foreign direct investment and increase economic growth and development (Hodge and Hickman, 2018) [7].

Tiebout (1956) [12] in his model assumed that tax competition between tax jurisdictions (countries, governments, municipalities) lead to optimal provision of public goods. Free mobile people can choose among governments or municipalities according to tax burden and public goods. But such tax competition can lead to suboptimal level of tax rates and tax revenue will be too low to finance the required level of public goods (Sedmhradsky and Klazar, 2002) [10]. Therefore, governments fear from tax competition considering it harmful and trying to use mechanisms to prevent tax competition.

But according to some economists tax competition is beneficial for citizens, boosts economic welfare, productive investment, and employment. Reducing corporate tax rates leads to increased investment, productivity gains, and, in turn, increased economic growth, output, and higher standards of living (Hodge and Hickman, 2018) [7]. At the same time, it forces the government to use resources more wisely and increase the efficiency of government spending (Boss, 1999; Black and Hoyt, 1989) [5; 4]. If tax competition acts as a restraint on governments' ability to raise taxes, then it should also act as a spur to greater efficiency in the public sector (Teather, 2005) [11].

This paper analyzes the tax system of selected Central Asian countries: Kyrgyzstan, Kazakhstan, and Uzbekistan, and examines if there is tax competition between these countries. Also, the relationship between the tax rate of corporate tax and foreign direct investment will be investigated

using Clemente-Montano-Reyes Unit Root Test analysis. Thus, this study searches the answers to such questions as: Does tax competition between these countries exist and how the decrease in corporate tax rates affect foreign direct investment?

After the introduction second section describes the taxation of capital and tax incentives on corporate tax in Kyrgyzstan, Kazakhstan, and Uzbekistan. Third section analyzes the relationship between foreign direct investment and income from corporate tax in these countries using Clemente, Montañés, and Reyes's (1998) structural break unit root test. In section IV main findings and conclusion are given.

2. Tax Reforms and Tax Competition In Central Asia

After the collapse of the Soviet Union, Central Asian countries adopted a new tax system appropriate for a market economy. At the first stage, the corporate tax rate in all post-Soviet countries was reduced and a system of tax incentives was introduced to stimulate private entrepreneurship and to attract foreign investment. However, the system of preferential taxation did not fully stimulate real capital investments. This is because of the insufficiently high incomes of producers and the inefficiency of the system of benefits, as well as the fact that the mechanism for providing benefits contributes to abuse (Panskov, V.G., 2014) [9].

The experience of the first ten years of economic reform has shown the complexity of the chosen path in all transition countries. The only way to reach dynamically economic growth was the resumption of production based on new approaches and methods. Without attracting foreign direct investment and new technologies, it is impossible to achieve stable GDP growth and the socio-economic status of the republic (Ibraimov, 2002) [8]. The situation of Kyrgyzstan was especially hard because of the lack of natural resources as petrol and gas.

GNI per capita in Kazakhstan 9685 US\$, in Uzbekistan 2096US\$ and in Kyrgyzstan 1050US\$. Economic growth rate is highest in Uzbekistan 5%. Tax revenue to GDP ratio in Kyrgyzstan 17%, in Uzbekistan 12.2% and 10.5% in Kazakhstan. However share of direct taxes (taxes on income, profit and capital gains) is 42.5 % in Kazakhstan, 34.9% in Uzbekistan and 19.1% in Kyrgyzstan. Also, in Kyrgyzstan tax payments are the highest and consist 51, while in Uzbekistan and Kazakhstan only 10 payments need for taxpayers to fulfill tax obligations (table 1).

Table 1. General Socio-Economic Indicators of Selected Central Asian Countries in 2018

	Kyrgyzstan	Kazakhstan	Uzbekistan
Population (person)	6 315 800	18 276 499	32 955 400
GNI, Atlas method (current US\$)	7700206967.6	143089761964.9	66 512607333.6
GNI per capita (constant 2010 US\$)	1050.6	9685	2096
GNI per capita, Atlas method (current US\$)	1220	7960	2020
GDP growth (annual %)	3.5	4.1	5.1
Poverty Rate (2017), %	25.6	2.5	n.a.
Inflation, consumer prices (annual %)	3.18	7.4	n.a.
Tax revenue (% of GDP), 2017	17	10.5	12.2
Taxes on income, profits and capital gains (% of total taxes) 2017	19.1	42.5	34.9
Share of labor tax and contributions (% of commercial profits)	19.5	11.1	17,4
Tax payments	51	10	10

Source: World Bank Database.

All three countries began to use free economic zones to attract foreign direct investment and increase export potential. Currently, there are 5 free economic zones in the Kyrgyzstan and 14 in Kazakhstan. In Uzbekistan, operating 22 free economic zones and 143 small industrial areas. But free economic zones did not give expected result and did not become the locomotives of the development

of industry in Kyrgyzstan and Uzbekistan. But according to chief economist of Asian Development Bank Shang-Jin Wei Special Economic Zones (SEZ) in Central Asia can become an engine of trade growth and foreign direct investment (FDI) if they properly planned, as well as better economic policies and reforms. In addition, as countries develop, regions with SEZs can be transformed from simple production sites to centers of innovation and modern services (Asian Development Bank, 2015) [3].

After the obtaining independence in all transition countries began structural reforms. Corporate tax rates in Kyrgyzstan reduced from 20% to 10 percent since 2006. But Uzbekistan is actively reforming corporate tax rate and it reduced from 10 % in 2009 till 7.5% in 2018. Corporate Tax Rate in Kazakhstan stands at 20 percent. Corporate Tax Rate in Kazakhstan averaged 22.86 percent from 2005 until 2018, reaching an all-time high of 30 percent in 2006 and a record low of 20 percent in 2009 (table 2).

Table 2. Corporate and Social Tax Rate in Uzbekistan, Kazakhstan and Kyrgyzstan

Corporate Tax Rate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Uzbekistan*	10	10	9	9	9	8	8	7.5	7.5	7.5
Kazakhstan*	20	20	20	20	20	20	20	20	20	20
Kyrgyzstan	10	10	10	10	10	10	10	10	10	10
Social Tax and Social Security Contribution Rate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Uzbekistan*	26.5	27.5	29.5	29.5	30.5	31.5	32	32	32	32
Kazakhstan*	26	26	26	26	26	31	31	31	11	11
Kyrgyzstan	37.25	37.25	37.25	37.25	37.25	37.25	37.25	37.25	37.25	37.25

Source: <https://tradingeconomics.com> 15.04.2019.

Social security contribution (social tax) rate is too is an important indicator that affects the tax burden level of the firm, investors' decision and the attractiveness of the country for investors. Here we see that the social tax rate in Kazakhstan decreased by about three times in 2017. In Uzbekistan, it rose to 32%, while in Kyrgyzstan; the social tax rate is 37.25%.

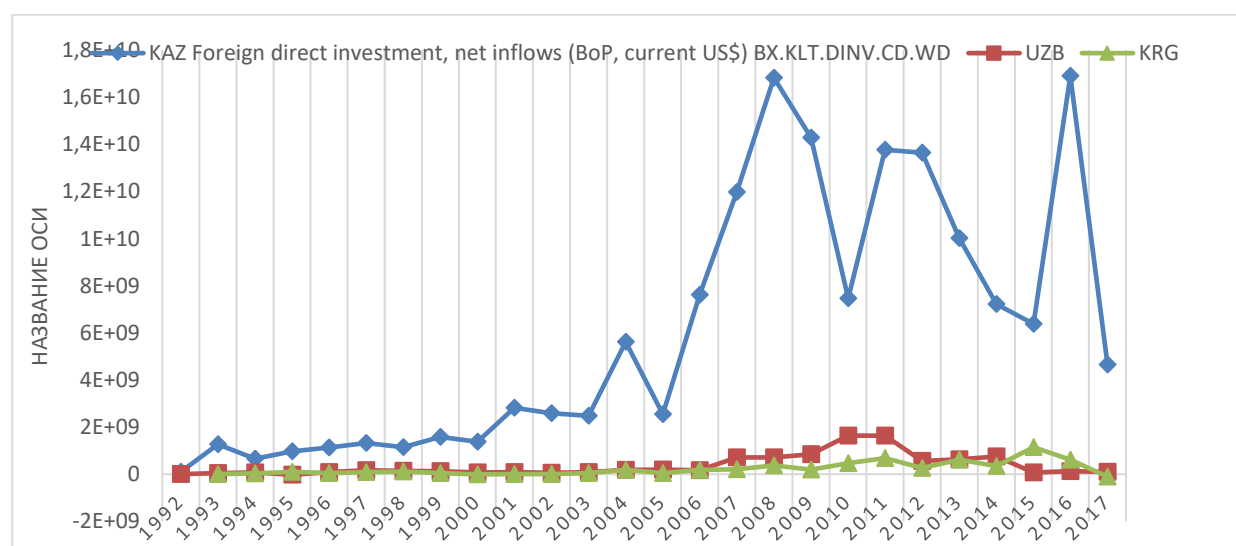


Figure 1. Foreign Direct Investment in Kazakhstan, Uzbekistan and Kyrgyzstan

*Net inflows (BoP, current US\$). Source: World Bank Database (10.09.19).

Data on foreign direct investment (FDI) in Kazakhstan, Uzbekistan and Kyrgyzstan show that in Uzbekistan and Kyrgyzstan the inflow of FDI since 1992 is almost stable and significantly low compared to the inflow of FDI in Kazakhstan. In Kazakhstan, foreign direct investment began to grow

from 2000 to 2004, but in 2005 they decreased, and then increased sharply until 2008. The global financial crisis has seriously affected the inflow of foreign direct investment and declined until 2010. Between 2015 and 2017, there were serious fluctuations.

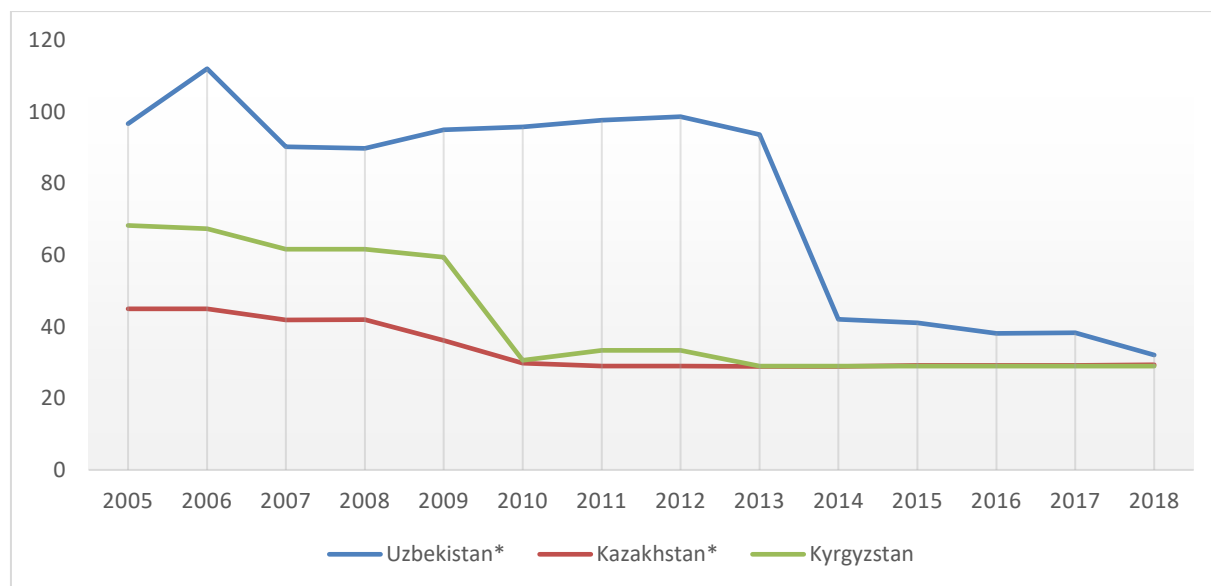


Figure 2. Total Tax and Contribution Rate (% of profit)

Source: World Bank database.

The total tax and contribution rate in Uzbekistan in 2006 was 112% and decreased more than twice in 2014 (42.1%) and till 32.1% in 2018. In Kyrgyzstan, the total rate of tax and contribution was about 60% during 2005-2009 and it is 29% since 2013. Total tax and contribution rate in Kazakhstan was the lowest during 2005-2009 about 40% and it lowered to 29% after 2010.

Table 3. Taxation Indicators in Kazakhstan, Kyrgyz Republic and Uzbekistan (Doing Business report)

	Payments (number per year)	Time (hours per year)	Total tax and contribution rate (% of profit)	Post filing index (0-100)	Doing Business Rank 2018
Kazakhstan	7	178	29.2	48.85	50
Kyrgyz Republic	51	225	29	37.38	151
Uzbekistan	10	181	38.3	48.39	78

Source: Taxation indicators of Doing Business, 2018.

Indicators of tax competition include not only tax rates but also the tax administration and the tax system effectiveness. Tax indicators of Doing Business 2018 show that the amount of tax payments is low in Kazakhstan (7) and Uzbekistan (10), while in Kyrgyzstan it is seven times higher (51). The time needed for implementing all tax liabilities also highest in Kyrgyzstan (225 hours per year), in Uzbekistan and Kazakhstan 181 and 178 hours per year similarly. However, the total tax and contribution rate is almost the same in Kyrgyzstan and Kazakhstan (29%), but in Uzbekistan, it is 38.3%. According to the result in the ranking of easily paid taxes by the World Bank, Kazakhstan is the leader (50th place), followed by Uzbekistan (78th place) and finally Kyrgyzstan in 151st place.

3. Data and Methodology

Foreign direct investments net inflows (BoP, current million US\$) data obtained from the World Bank dataset for the period 1993-2018 years were used for the analysis. Since our goal is not stationarity of the variables but structural changes in time variables, as a research methodology was chosen Clemente-Montanes-Reyes (1998) structural break unit root test.

Clemente-Montanes-Reyes (1998) bases their test on Perron-Vogelsang's (1992) "endogenous" structural break unit root test. This test allows two structural breaks in the mean of the series. The test uses two separate regressions as below to detect structural breaks: test investigates data for a sudden change in the mean of series, the additive outliers model (AO); and alternative for a smooth transition over time, the innovational outliers (IO) model, which allows for a gradual shift in the mean of the series.

$$H_0 : y_t = y_{t-1} + \delta_1 DTB_{1t} + \delta_2 DTB_{2t} + u_t \quad (1a)$$

$$H_1 : y_t = \mu + d_1 DU_{1t} + d_2 DU_{2t} + e_t \quad (1b)$$

DTB in the model (1a) means a pulse variable equal to 1 if $t = TB_i + 1$ and 0 otherwise. In addition, in model (1b), $DU_{it} = 1$ if $t > TB_i$ ($i = 1, 2$) and 0 otherwise. TB_1 and TB_2 represents the time periods when the mean is being modified. Now, suppose that $TB_i = \lambda_i T$ ($i = 1, 2$) where $0 < \lambda_1 < 1$ and $\lambda_2 > \lambda_1$. If the two breaks belong to the innovational outlier, which allows for a gradual shift in the mean of the series, we can test the H_0 (the series has a unit root with structural break(s)) against H_1 (the series is stationary with break(s)):

$$y_t = \mu + \rho y_{t-1} + \delta_1 DBT_{1t} + \delta_2 DBT_{2t} + d_1 DU_{1t} + d_2 DU_{2t} + \sum_{i=1}^k c_i \Delta y_{t-i} + e_t \quad (2)$$

In regression (2), the minimum value of the simulated t-ratio is obtained and it can be used for testing if $\rho = 1$ for all break time combinations (Clemente et al., 1998) [6].

If the shifts are better described as additive outliers (which captures a sudden change in the mean of a series), the H_0 can be tested through a two-step procedure: first, eliminate the deterministic part of the variable by estimating the following model (3):

$$y_t = \mu + d_1 DU_{1t} + d_2 DU_{2t} + \tilde{y}_t \quad (3)$$

After, we should take residuals from previous model and estimate the following model (4), by assuming $\rho = 1$.

$$\tilde{y}_t = \sum_{i=0}^k \omega_{1i} DTB_{1t-i} + \sum_{i=0}^k \omega_{2i} DTB_{2t-i} + \rho \tilde{y}_{t-i} + \sum_{i=1}^k c_i \Delta \tilde{y}_{t-i} + e_t \quad (4)$$

The dummy variable DTB_{it} is included in the model to make sure that $\min t_p^{AO} (1, 2)$ converges to the distribution (Clemente et al., 1998) [6]:

$$\min t_p^{IO} (\lambda_1, \lambda_2) \rightarrow \inf_{\lambda=\Lambda} \frac{H}{[\lambda_1(\lambda_2 - \lambda_1)(1 - \lambda_2)]^{1/2} K^{1/2}} \quad (5)$$

The critical values provided by Perron and Vogelsang (1992) are used for the test, as they do not follow the standard "Dickey-Fuller" distribution (Baum, 2001) [2; 25].

Empirical results and discussion

Results of Clemente-Montano-Reyes Unit Root Test presented in table 5.

Table 5 shows that Kazakhstan and Uzbekistan's FDI series are stationary at a 5% significant level after including one break. However, as I mentioned above, our goal is not stationary, but structural changes in time variables; we should concentrate on break dates. For Kazakhstan's FDI data one optimal break model has calculated 2003 (AO model) and 2005 (IO model) years, two break models point to 2005/2013 (AO model) and 2005/2014 (IO model) years. All breaks are statistically significant. For Uzbekistan, these breaks are 2006 and 2007 according to one break model, 2006/2013 and 2005/2014 according to two break models. Except for the 2013 year, other breaks are statistically significant. And finally, for Kyrgyzstan, one break models point out 2007 and 2008 years, two break models point out 2007/2013 years. Except for 2013, other breaks are statistically significant too.

In 1995, the President of the Republic of Kazakhstan issued a decree "On taxes and other obligatory payments to the budget", which regulated the tax system in Kazakhstan. In 2002 Kazakhstan adopted the Tax Law that was a more general legal act than the Decree and regulated the relationship between the state and the taxpayer and provides procedures for calculating and paying taxes. Foreign direct investments in Kazakhstan increased in 2003 but decreased a year later and they steadily were rising from 2005 till 2008. Corporate tax was at 20% from 2009 till 2018, but foreign direct investment decreased from 2012 till 2015. In 2012 economic growth in Kazakhstan slowed to 5% (7.5% in 2011) due to weakening external demand, technical difficulties in the oil sector, and a downturn in agriculture. A sharp deceleration in 2012 of the growth rate of oil prices negatively

affected the economy of Kazakhstan. Generally, the economic situation in the CIS (Commonwealth of Independent States) region at the end of 2012 was the weakening of investment demand and a slowdown in production in export-oriented industries (<https://eabr.org/press/news/ia-kazakhstan-segodnya-v-2012-godu-v-sng-nablyudalos-zamedlenie-proizvodstva-v-eksportoorientirovann/>, 05.09.21) [19].

Table 5. Clemente-Montano-Reyes Unit Root Test Results

Variable	Countries	Additive outlier (AO)		Innovational outlier (IO)		Additive outlier (AO)		Innovational outlier (IO)	
		Min t*	Optimal break point	Min t*	Optimal break point	Min t*	Optimal break points	Min t*	Optimal break points
FDI	Kazakhstan	- 3.62**	2003*	- 5.65**	2005*	- 4.52	2005*, 2013**	- 1.33	2005*, 2014*
	Uzbekstan	- 6.40**	2006*	- 5.49**	2007*	- 3.22	2006*, 2013	- 4.72	2005*, 2014**
	Kyrgyzstan	-2.14	2007*	-3.72	2008**	- 1.27	2007**, 2013	- 3.45	2007***, 2013
Critical Values (5% significance level)		- 3.56		- 4.27		-5.49		-5.49	

Source: STATA 11

Not: ** after min t* values indicates to the significance of the value at 5% level; *, **, *** after break point(s) indicates to the significance of t^* statistics of the break(s) at 1%, 5% and 10% level respectively.

In Uzbekistan, tax rates are revising every year by the Cabinet of Ministers. In 2004 corporate tax rate was 18% (<https://www.lex.uz/acts/247456>, 10.07.2021) [20], in 2005 it decreased till 15% (<https://lex.uz/docs/503896>, 10.07.2021) [21], in 2006 and 2007 corporate tax rate lowered to 12% and 10% respectively (<https://lex.uz/docs/1097162>, 07.08.21) [22]. In 2014 corporate tax rate decreased to 8% but foreign direct investment in spite of this lowered sharply.

In Kyrgyzstan, the corporate tax rate was 30% till 2000 (<http://cbd.minjust.gov.kg/act/view/ru-ru/35654>, 10.07.21) [23], during 2000 and 2005 it was 20% and in 2006 corporate tax decreased to 10%. But along with this, in 2007- and 2008-years growth of GDP was high 8.5% and 8.4% respectively. The main reasons were the rise of re-export from China to Russia and remittances, also dynamic growth of construction and communication sectors (Abdieva, 2018: 5) [1].

Generally, empirical results showed that tax reforms have an effect on the level of foreign direct investment inflow in all three countries. But, but at this stage of development in all countries, economic development has a more significant effect on the inflow of FDI. Therefore, for this country sustainable and inclusive economic growth is a vital factor in attracting FDI. Along with this, empirical results showed that the development of the economy of these countries as all countries in the region is linked with each other. Therefore, cooperation between countries can foster general economic development in long term.

We could not observe aggressive or active tax competition between these countries. The corporate tax rate in Kazakhstan and Kyrgyzstan is stable since 2009 and 2006. But in Uzbekistan tax rates are revising every year. Kazakhstan and Kyrgyzstan are members of the Eurasian Union and direct tax rates could be subject to harmonization in the future.

4. Conclusion

Higher mobility of capital and labor during the age of globalization has led to tax competition between countries. Tax competition caused both developed and developing countries to shift the tax burden from capital to labor. During this process tax rates of corporate tax are decreasing, while they provide tax incentives. Such a policy would have a two-sided effect on the economy: positively, if

foreign direct investment inflow increases and brings together technology and innovation. Also, it may harm the national economy by diminishing tax revenues and social expenditure.

This paper analyzes the tax system of selected Central Asian countries: Kyrgyzstan, Kazakhstan, and Uzbekistan, and examines if there is tax competition between these countries. Also, the relationship between the tax rate of corporate tax and foreign direct investment will be investigated using Clemente-Montano-Reyes Unit Root Test analysis. Thus, this study searches for the answers to such questions as Does tax competition between these countries exist and how does the decrease in corporate tax rates affect foreign direct investment?

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We could not observe aggressive or active tax competition between these countries. The corporate tax rate in Kazakhstan and Kyrgyzstan is stable since 2009 and 2006. But in Uzbekistan tax rates are revising every year. Kazakhstan and Kyrgyzstan are members of the Eurasian Union and direct tax rates could be subject to harmonization in the future.

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