Determinants of Tax Incentives and the Effect of Corporate Tax Rate on the Foreign Direct Investment; Empirical Analysis of Iraqi Government Tax Policy with Comparison to KRG's Regulations

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***Abstract*—Corporate tax incentives are granted by governments to encourage foreign direct investment FDI. While, the tax policy in Iraq varies for both domestic and foreign investments, the Iraqi government offers tax holidays between 3 and 10 years to attract foreign investors to do their desirable investment. The objective of this research is to analyze how the Iraqi's corporate tax rate affects FDI and study the comparison between Iraqi and KRG tax policies. The data are annual observation of Iraqi tax rate which is the net percentage of profit and FDI net percentage of GDP. The time-series data from 2005 to 2019 were employed. Three distinct sorts of tests are engaged in this research, the first stage unit root test is conducted to determine the stationary of the data, second, Johansen cointegration test was used to find cointegration between variables, and finally, the Granger causation test is used to determine causality among variables over the period. The finding result shows that the tax rate and FDI are cointegrated and have a long-run relationship. Particularly, foreign direct investment is impacted by changes in the tax rate, while fluctuation in the number of FDI has not any influence on the tax rate.**

***Keywords*—FDI, Granger causation, Johansen cointegration, Multinational companies, Tax incentives, Tax policy, Tax Rate.**

I. Introduction

Corporate tax incentives are economic development allowances that granted by governments to encourage foreign direct investment (FDI). A more favorable tax rate offered to a foreign corporation is frequently enough to render an investment viable or a business migration to another nation ideal. For example, Ireland is widely known among EU nations for its aggressive business tax policy, which encourages foreign investments. Many governments in emerging and transition economies have long sought to attract additional FDI from the multinational corporation (MNC). One motive is the likelihood of good spillovers for local businesses from FDI, it's also possible that FDI leads to more effective patterns of asset ownership across states. Nearly 85% of the countries surveyed in study of Azémar and Dharmapala, 2019, the result offers statutory corporate tax reduction or tax holidays for specific foreign investments, according to a global survey covering five developed countries from all regions and 40 transition and developing economies of the world (excluded North America).

Furthermore, the FDI agreement is a contract between local and a foreign corporation under which parties involved are authorized to a range of financial rewards and duties over a specific period. Benefits to the company are often provided in the form of subsidies, guarantees, or reduced tax rates, while responsibilities are typically demanded in the form of the increased national unemployment rate, human capital investment, and the formation of business partnerships with local enterprises.

In Iraq, the tax policy varies for both domestic and foreign investors. Iraqi government offers tax exemption ranging from 3 to 10 years to attract foreign investors for their desirable actions and investments, which in return will lead to decrease in overall government's annual income tax. On the other hand, investors in Iraq are facing significant difficulties in resolving concerns with the Iraqi government regarding procurement disputes, payments promptly, and

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winning public bids. Companies are operating in Iraq frequently complain about corruptions, customs regulations, registrations, unobvious visa residency permission and its procedures, electricity deficit, high tax rate liabilities, and weakness of financial services. Sometimes, foreign investors are burdened much more by shifting and inconsistently implemented restrictions and regulations.

Many of these issues confront with investors in the Kurdistan Regional Government (KRG) as well. Nonetheless, the KRG historically has more stable security environment but could not overcome with the mentioned difficulties. On the other hand, the economy upturn in this region has faced many obstacles due to the ISIS attack in 2014, the collapse in oil prices, the fallout from the Kurdish referendum for independence in 2017, and continual budget dispute between Kurdish and Iraqi central government (Kellard et al., 2022).

Subsequently, the Iraqi Government operates under the modified National Investment Law of December 2015 which attempt to improve investment opportunities for international investors, offers the acquisition of land in Iraq for specified projects, and an investment licensing procedure; all the mentioned are included in the Iraqi investment legislation. However, the land for commercial or residential construction is still incredibly difficult to come by. Iraq has agreed to implement the Convention for the Settlement of Investment Disputes (ICSID) between States and Non-State Actors (ICSID) since 2015 (ICSID).

The bureaucratic obstruction, the lack of proactivity in banking and financial sector, and the corruptions are creating more challenges to foreigners to proceed their investment projects. While the Iraq's Public banks primarily work for settling the country's public sector wages, there are just few largely regional controlled commercial banks and privately owned banks engaging in currency exchange enterprises until then. However, the commercial lending is possible through certain privately held banks, but the absence of a credit monitoring system, inadequate legal protections for creditors, and limited relation with foreign institutions make it difficult to FDI opportunities.

Back to Kurdistan region, because of the independence referendum attempt in September 2017, the financial sector of the KRG has still been recovering from the past years' instability in both economy and politicians, and the Central Bank of Iraq (CBI) has placed restrictions on its financial institutions. KRG is authorized the Investment Law regulation and policy by year. Based on set rules; foreign investors are provided several benefits including, complete property ownership, capital repatriation, and 10-year tax exemption. It may be observed in the KRG's oil and gas agreements that increase production, the KRG is typically amenable to public-private partnerships (PPPs) and long-term funding (Bureau of Economic, 2019).

In the meantime, the Iraqi government, under the National Investment Regulation number 2 of 2009, obligated the foreign companies that 50% of their workforce must be the Iraqi citizens. Before recruiting foreign employees, the companies have to prioritize Iraqi nationals. The government of Iraq has put pressure on international corporations to recruit more Iraqis and has pushed them to engage with local industry and buy Iraqi made products. Whereas, the Iraqi government is often supporting state-owned enterprises (SOEs) and state-controlled banks, the KRG's investment legislation from 2006 allows for complete foreign ownership. This favoritism is unfair to both domestic and international investors.

Besides, the Iraqi Tax Treaties (TTs) and Bilateral Investment Treaties (BITs) are another challenges for FDI. Iraqi government has agreed to sign memorandums of understanding or investors protection agreements with nine international organizations and 35 bilateral partners. Among the accords are those with Germany, the United Kingdom, Japan, France, Turkey, India, South Korea, Jordan, Iran, Kuwait, Vietnam, Syria, Tunisia, Armenia, Mauritania, Sri Lanka, Yemen, Bangladesh, and Afghanistan, as well as those with the Arab League.

Iraq has bilateral trade agreements in place with Germany, France, Japan, Armenia, Kuwait, and Jordan. Only the bilateral investment treaties with Kuwait and Japan are in effect. General measures on promoting and preserving investments are included in Iraq's investment agreements, including terms on benefit repatriation, accessibility to arbitration and dispute resolution, equitable expropriation procedures, also compensation for losses. The competence and inclination of the Government of India to implement such prohibitions is unknown (Bureau of Economic, 2019).

The objective of this research is to find out the impact of corporate tax rate on foreign direct investment in Iraq and how the tax incentive encourage more multinational corporation to engage their desirable business in the region. For analyzing the research objective, this study hypothesis is as follows;

H_0: There is not an effect of corporate tax rate on the foreign direct investment

H_1: There is an effect of corporate tax rate on the foreign direct investment

The rest of the paper is organized as follows: Section two; reviews past previous studies, section three; describes the data sampling and research methodology, section four; presents the empirical models and analysis findings, and then section five; will conclude the research study.

II. Literature Review

FDI refers to a multinational enterprise (MNE) purchasing tangible assets or a sufficient amount of a company's ownership in another nation to gain managerial control. It often entails physical investments in facilities and equipment, as well as cash flows from mergers and acquisitions that result in sole ownerships or joint ventures. The impact of tax policy on investment choices made in the face of uncertainty, and it has been a major topic of research in accounting and finance studies. Most theoretical conclusions according to model settings in which market uncertainties are included, the investment costs are constant and irrelevant, also depreciation and tax rates are both known (Azevedo et al., 2019, Tavares-Lehmann et al., 2012).

The study of tax, FDI, and MNE are broad extensive topics in literature which cannot be fully covered in one paper. To set the context for our use of the two semi-methodologies that present a quick summary. Tian, 2018, studied and contrasted two methods for attracting foreign investors by the central government including tax rate reduction, subsidy, and investment cost throughout indifferent FDI potential gains. Tian, 2018, has examined the effectiveness of two strategies in a consistent framework, taking into consideration, the government strategic engagement as well as the exchange between the current and predicted aggregates value of the subsidy and the prospective random flow of tax rate reductions. Besides, Yu et al., 2007, study presents various suggestions on how economic plans impact foreign direct investment timeliness and which central government might implement to stimulate FDI; indicating that when their thresholds are maintained constant, the entry subsidy costs substantially less than the provided tax rate drop. As a consequence, a host government wishing to attract FDI should focus more on lowering entrance costs than manipulating tax rates, since entry cost subsidies are very inexpensive and efficient.

The way of study analysis varies among previous researches in many ways. The tax factors, such as tax base, the bilateral corporate tax rate, statutory tax rate, effective marginal tax rate, and the average tax rate, have used in their researches. The time-series data, cross-sectional, or panel design has used in analyzing companies, industries, subnational, national, or bilateral level (Baccini et al., 2014). Azémar and Dharmapala, 2019, the expansion of tax-avoidance measures in bilateral tax treaties may be a powerful tool for attracting FDI to the developing countries. In a world, where most residency nations are territorial, the findings further emphasize the need for tax-saving policies. They should be of interest to economic development experts and policymakers, in addition to those involved in international taxation and public finance.

Merz et al., 2017, examined taxation influence and regulations based location of the financial sector on the foreign direct investment, it uses novel data to conduct the empirical research, which spans 13 years and covers the whole of German outbound FDI. The findings imply that both regulations and tax incentives have a role in where finance sector FDI is located. However, Kim et al., 2012, to compete for attracting FDI, researchers looked at the impact of trade agreements on MNCs regarding FDI location decisions and asymmetric countries' tax and trade regulations. Due to a fundamental model for which three heterogeneous nations compete for attracting FDI, it is proved that a non-member country may promote the flow of FDI by granting surplus subsidies, it may be welfare degrading. Deng et al., 2012, primarily models the effects of China's new corporate income tax on the FDI production spillover in 2008, reforming the tax code raises the productivity of domestic businesses, and improves national welfare. Furthermore, when firms are heterogeneous, the spillover advantage of merged reform is much more pronounced, since reform might enhance the productivity levels of all existing companies, hence increasing the likelihood of productivity spillovers and the domestic absorption capacity.

Farnsworth and Fooks, 2015, study look at the influence of corporate taxation on FDI imposed by sub-national governments. As a consequence, there are reasons to be hopeful and pessimistic for those opposed to corporate tax evasion.

Following the financial crisis, worldwide attempts to combat tax evasion, along with increased discontent within mainstream political discussion over systematic tax avoidance, may lead to more effective measures to combat the issue. However, the findings of Braymen et al., 2016, imply that allowing FDI might result in reduced tariff rates. The findings back up those of Deng et al., 2012, who point to the growing number of RTAs containing investment provisions and their favorable impact on FDI flows. Hristu-Varsakelis et al., 2011's, study suggests lowering tax rates to increase in corporation tax collection and in return to attract FDI. Furthermore, numerical studies utilizing data from 12 OECD nations from 1982 to 2005, demonstrates that tax competitiveness will not result in a race to the bottom for the group. Race-to-the-bottom circumstances did arise in our trials for extremely high volumes of FDI input around 50 times the 2005 number, ceteris paribus.

III. Data and Methodology

A. Data

These research data are Iraqi observation on tax rate which is the annual net percentage of profit, and FDI net percentage of GDP, to explore, time-series data from 2005 to 2019 were employed, with totaling 15 observations. To study the influence of tax on FDI, the data comprised Iraqi Tax (y), which is a constant and dependent variable, and foreign direct investment (x), which is an independent variable across time, in this instance for Iraq. The data were acquired from the World Bank and the Iraqi Central Bank.

B. Methodology

Three distinct sorts of tests are employed in this research, all of which are assessed using the E-views software program. The first stage unit root test is conducted to determine the stationary of the data, FDI is the independent variable, whereas tax is the constant and dependent variable. Second, Johansen cointegration test was used to find cointegration between variables. Finally, the Granger causation test was used to determine if there is causality between variables or whether the variables impact each other over time. In addition, in the model one dependent applied, whereas the other variables were independent, as shown in Equation 1.

$$In\ \ FDI_t = \beta_0 + \beta_1 InY_t + InX_t + \varepsilon_t \quad (1)$$

Where:
In TAX (y) represent the Tax rate
In FDI (x) represent foreign direct investment
ε Represents error

IV. Empirical Models and Analysis Results

A. Unit Root Test

The models employed the Augmented Dickey-Fuller (ADF) and Phillips Perron (PP) tests to assess if the data were stationary, indicating that the null hypothesis (H0) had a unit root indicating that the data are not stationary meaning the alternative hypothesis (H1) was stationary or otherwise. The findings reveal that the data are stagnant at various levels. Furthermore, autocorrelation may be an issue with the ADF. Several options must be made during the actual ADF test, such as whether the models move with the trend and intercept, or simply intercept, or none at all. Sample model for augment dickey fuller test stated below (Equations 2, 3, and 4), further information is provided in Tables I-III.

$$\Delta y_t = \beta 1 + z y_{t-1} + \alpha_i + \in_t \text{ With intercept} \quad (2)$$

$$\Delta y_t = \beta 1 + \beta 2_t + z y_{t-1} + \alpha_i + \in_t \text{With trend and intercept} \quad (3)$$

$$\Delta y_t = z y_{t-1} + \alpha_i + \in_t \text{ Without trend and intercept} \quad (4)$$

B. Johansen Cointegration Test

Evaluating Johansen cointegration on the model after running unit root tests shows that data are stationary, thus the next step is to run the model by testing whether or not variables interact with one another and have direct or indirect correlations. The Trance test reveals the number of cointegrated variables. The approach for the Johansen cointegration (VAR) model is shown below.

$$X_t = \Pi_1 X_{t-1} + \ldots + \Pi_k X_{t-K} + \mu + e_t \ (\text{For } t = 1,\ T) \quad (5)$$

Where:-

X_t and X_{t-1}, and X_{t-K} illustrate vector, probabilities lag.

Π_1 and Π_K illustrate coefficient matrices

μ illustrates an intercept vectors

e_t illustrates the vector random errors

In this situation, a one-to-one lag interval was applied. To begin, $P < 5\%$, therefore, according to the probability outcome, H0 is rejected and H1 accepted. In addition, the trance statistic has verified to reject H0 since it is more than the critical value. Moreover, refereeing to At most 1 when using one cointegrating equation, or all other variables are cointegrated, if probability value results in more than 5%, then null hypothesis cannot be rejected and otherwise, indicating the correlation among variables. On the other hand, if the trance value is less than the crucial value the H0 hypothesis must be accepted. Furthermore, regarding Max-Eigen statistic, and trance statistic all variables are cointegrated and moving together in the long term. Table IV displays the outcome.

C. Granger Causality Test

Following the application of the Johansen cointegration test, the Granger causality test is conducted to assess the causality between tax and FDI. The Granger causality test's criteria are to confirm that the H0 is rejected when using the F-statistic technique. If the value is more than 10%, if $P < 10\%$, the null hypothesis should be rejected and the alternative hypothesis accepted. If probability value is <5%, the H0 is rejected as well as accepted H1 and otherwise. Findings indicate that the tax rate causes FDI but the volatility of FDI does not affect the tax rate over the period. The data model is shown below, along with the Granger causality test findings in Table V.

Table I
Unit Root Test Result When ADF Applied with an Intercept at Level

Variable	Level				
	Probability	Test - statistic	Critical values		
			1%	5%	10%
TAX (y)	0.0005	−5.726409	−4.004425	−3.098896	−2.690439

Table II
Unit Root Test Result When ADF Applied with an Intercept at the Second Difference

Variable	At 2nd difference				
	Probability	Test - statistic	Critical values		
			1%	5%	10%
FDI (x)	0.0415	−3.293664	−4.200056	−3.175352	−2.728985

Table III
Unit Root Test Result When PP Applied with an Intercept at Level

Variables	Level				
	Probability	Test statistic	Critical values		
			1%	5%	10%
TAX (y)	0.0022	−4.859847	−4.004425	−3.098896	−2.690439
FDI (x)	0.0054	−4.504480	−4.121990	−3.144920	−2.713751

Table IV
The test result of Johansen Cointegration

Hypothesis LNFDI LNE LNX	Trace - statistic	Critical values	Probabilities**	Results H_0
		0.05		
None**	35.68798	15.49471	0.0000	Rejected
At most 1	2.607581	3.841466	0.1064	No rejected

Lags 1-1 interval is at the first difference. Trace statistics illustrate one cointegrating at both levels of 5% and 1%. * (**) determine the rejection of the hypothesis at both levels of 5% and 1%

Table V
Test result of Granger Causality

Lag levels	Lag: 2		Result
Null hypothesis	F-Stat	*P*-value	
Tax (Y) and FDI (x)			
Tax dose cause FDI	5.45640	0.0320	Rejected the null
FDI does not cause tax	0.18944	0.8310	Do not reject the null

V. Conclusion and Recommendations

Many governments in emerging and transition economies have long sought to attract incoming FDI from multinational

companies (MNCs). While, the Iraqi's tax policy differs between local and foreign investments, the Iraqi government attempts to encourage foreign investors by granting tax relief ranging from 3 to 10 years, resulting in a reduction in the total annual government tax.

The main aim of this research is to find out how Iraqi's tax policy effect on foreign direct investment and foreign investors' decisions, with highlighting some study comparison between to the Iraqi and KRGs' foreign direct investment set of regulations and policy. The data are annually Iraqi observations on the tax rate, which is the net percentage of profit, and FDI, which is the net percentage of domestic production growth. The time-series data are utilized from 2005 to 2019 leading to 15 observations, and the data are acquired from the World Bank and the Iraqi Central Bank.

Three distinct sorts of tests are employed in this research, all of which are assessed using the E-views program. First and foremost, the data were found to be stationary using the unit root test. Second, Johansen cointegration test was used to discover cointegration between the variables.

The findings of the Johansson cointegration demonstrate that both variables have a long-run correlation, implying that FDI in Iraq moves with Tax as well. Finally, the granger causality conclusion reveals that there is causation across variables or that variables influence each other over time, and that tax has an impact on FDI, however, FDI, on the other hand, does not affect to the taxation system.

In the light of reviewed previous literature, focusing on Iraqi's tax policy, Iraqi's tax reform, foreign direct investment over the past decade, also the result of this paper suggests that Iraq's government including KRG have to review its current tax policies, tax treaties (TTs), and bilateral investment treaties (BITs). The government needs to define foreign control limitations in advantages of multinational companies and provide the rights to private ownership and settlement, banking, and financial sectors. Moreover, the reform in the government institutions toward foreign companies is essential to reduce the paper works and routines.

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