### **MASTER'S DEGREE FINAL PROJECT**



# FACULTAD DE CIENCIAS JURÍDICAS Y DE LA EMPRESA

Departamento de Ciencias Sociales, Jurídicas y de la Empresa

**University Master's in Business Administration (MBA)** 

A Comparative Study of FDI and Fiscal and Economic Factors in Austria, Ireland, and Norway

Author:

Andreas Johansen Nordtømme & Daniel Wayne Johnson

Supervisor:

Dr. Vita Zhukova

Murcia, June 2023



### MASTER'S DEGREE FINAL PROJECT



# FACULTAD DE CIENCIAS JURÍDICAS Y DE LA EMPRESA

Departamento de Ciencias Sociales, Jurídicas y de la Empresa

**University Master's in Business Administration (MBA)** 

A Comparative Study of FDI and Fiscal and Economic Factors in Austria, Ireland, and Norway

Author:

Andreas Johansen Nordtømme & Daniel Wayne Johnson

Supervisor:

Dr. Vita Zhukova

Murcia, June 2023

### Acknowledgement

We would like to thank our tutor Dr. Vita Zhukova of Universidad Católica de Murcia. Without her insightful comments, advice and positive mindset – we would most definitely not have been able to create something that we are sincerely proud of. She always helped us, and gave us the material we needed, and always kept us positive.

Andreas Johansen Nordtømme & Daniel Wayne Johnson

Murcia, 19 May 2023

## Index

1.	Introduction9
2.	Literature Review11
	2.1 A Definition of FDI
	2.2 Competition Amongst Jurisdictions
	2.3 Taxation Rates and Infrastructure
	<b>2.4 Tax Havens</b>
	<b>2.5 The Study</b>
3.	Data and Methodology16
	<b>3.1 Used Variables</b>
	3.2 Descriptive Statistics
	<b>3.2.1 Means</b>
	3.2.2 Standard Deviation
	3.3 Statistical Analysis
	<b>3.3.1 Correlation</b> 26
	3.3.2 Regression Analysis
4.	Conclusion33
S	ources35
A	ppendix

### **ACRONYMS AND ABBREVIATIONS**

EU - European Union

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

GNI - Gross National Income

MNE – Multinational Enterprise

OLS - Ordered Least Squared Method

VAT – Value Added Tax

# LIST OF TABLES

Table 1: Descriptive Statistics	23
Table 2: Correlations - Austria	26
Table 3: Correlations - Ireland.	27
Table 4: Correlations - Norway	27
Table 5: Dependent Variable FDI Net Austria	31
Table 6: Dependent Variable FDI Net Ireland	31
Table 7: Dependent Variable FDI Net Norway	31
Table 8: Dependent Variable FDI Inflow Austria	37
Table 9: Dependent Variable FDI Inflow Ireland	37
Table 10: Dependent Variable FDI Inflow Norway	37
Table 11: Dependent Variable FDI Outflow Austria	37
Table 12: Dependent Variable FDI Outflow Ireland	38
Table 13: Dependent Variable FDI Outflow Norway	38
Table 14: Dependent Variable FDI Net Norway with GDP	38

## LIST OF FIGURES

Figure 1: FDI Net (World Bank, 2023)	17
Figure 2: FDI Inflow (World Bank, 2023)	17
Figure 3: FDI Outflow (World Bank, 2023)	18
Figure 4: GDP (World Bank, 2023)	18
Figure 5: GNI (World Bank, 2023)	19
Figure 6: Population (World Bank, 2023)	19
Figure 7: GDP per Capita (World Bank, 2023)	20
Figure 8: GNI per Capita (World Bank, 2023)	20
Figure 9: Unemployment Rate (World Bank, 2023)	21
Figure 10: Labor Force Participation Rate (World Bank, 2023)	21
Figure 11: Tax Revenue (World Bank, 2023)	22
Figure 12: Taxes on Income and Profits (World Bank, 2023)	22

#### 1. Introduction

Foreign Direct Investment (FDI) has become the stabilizing pillar and a significant driver of economic growth in many countries, under a variety of economic conditions, with activity increasing significantly in the past three decades. One of many key factors that has influenced the inflow of FDI is the tax regime of the country that is receiving the investments (Simões et al., 2014). Many governments are using tax incentives, exemptions and lower tax rates as a tool to lure in foreign investors and to become an attractive place to put investments (Hines, 2005).

It really is not that simple, and the relationship between FDI and taxation is something that is a complex and widely spread theory, that has been researched for many years. Lower tax rates might increase the profitability of the investment, but higher tax rates might signal a better bureaucracy – and thereafter a more stable and reliable economic environment for businesses to evolve in.

In this study we will take a closer look at three European countries and investigate the relationship between FDI and tax rates in each of the economies. We chose three European countries that are similar and comparable from the economic perspective. Austria, Ireland and Norway are comparable in their economic structures, geographic size and location, population, and Gross Domestic Product (GDP). Austria is a European Union (EU) member, and it serves as our reference European country in terms of FDI and studied economic indicators. Ireland is an EU member. While all three countries have comparable overall tax rates Ireland has a reputation as a tax haven due to tax policies that incentivize foreign investments with low corporate tax rates on Multinational Enterprises (MNEs) (Dharmapala & Hines, 2009). It has a significantly greater amount of FDI inflows and outflows, such that their Gross National Income (GNI) is 20% lower than their GDP. Norway is not an EU member, but it is a European Economic Area and Schengen member. While their GDP is similar to Austria their GDP per Capita is nearly double. Of the three countries Norway has the smallest amount of FDI activity.

To investigate our research questions, we utilized data from the World Bank database (World Bank, 2023) and analyzed it empirically. We first provide descriptive statistics with graphical illustration to present a general picture of the

data and then proceed with statistical inference. In particular, we looked for pairwise Pearson correlations between FDI and other variables and, afterwards, we estimate multiple linear regression model by means of Ordered Least Squares (OLS) method to investigate how FDI is explained by these variables in each country.

Our main findings indicate that the net FDI is negatively affected by economic indicators of GNI and unemployment rate in Austria and Ireland, while in Austria the net FDI is positively affected by a demographic indicator, as population, and labor market in terms of labor force participation. In Norway, we found negative effects of the tax policy and economic indicator of GDP and positive effects of the population on the net FDI.

#### 2. Literature Review

This section is dedicated to a review of the literature previously published on the subject of FDI. The main objective is to provide the reader with the state of the art, and to create an understandable background of the topic of our work. This section will be terminated by formulating a couple of research questions which will ultimately be tested in the later sections and in the end answered in the conclusion.

The first step in reviewing how countries of the world attract FDI, is to review literature that is already available regarding the topic and look at different variables considered to be crucial in attraction of FDI.

#### 2.1 A Definition of FDI

FDI is an investment from a foreign entity into businesses or productive assets in a host country. At the firm level an FDI represents a controlling interest in a firm or activity, not just a portfolio investment of publicly traded shares. At the country or international level, which will be the subject of this paper, FDI is normally measured as an aggregate of the total foreign investments flowing into or out of a given country. FDI is an important source of capital for economic growth, but it also introduces new jobs, technology, management techniques, products and services into the host economy. FDI can range from purely accounting transactions, (such as profit-shifting), to long-term investments in physical productive assets in a host country. FDI often creates stable and long-lasting links between economies (OECD Bank, 2022). When referring to FDI, there are different types which have been defined by the European Commission of trade (2022). For instance, FDI can come as a greenfield investment, as a merger, or an acquisition. Greenfield investment is defined as the creation of a new company or an establishment of facilities abroad. This kind of investment is used when companies want to retain and gain the highest degree of control over activities abroad. Mergers are as the name implies, a merging between two companies forming a new company. In an acquisition one company is bought and taken over by another (European Commission, 2022).

Julío et al. (2013) came to the conclusion that improving home institutions can have a positive effect in attracting FDI. Also, they looked at the rate of corruption

as a crucial aspect of inflow of FDI. If the country had a lower rate of corruption it was correlated with a higher level of FDI. Another angle to look at how to attract FDI is through Simões et al. (2014) paper on how the fiscal policy of a country affects FDI. Fiscal policies such as corporate income tax rates, carry-over of tax loses and elimination of double taxation. This research was mostly done in the Euro-zone, and it is an increasingly important tool in attracting FDI and staying competitive towards other countries (Simões et al., 2014). Becker et al. (2012) did a study regarding the importance of both the quality and quantity effects that corporate taxation has on FDI. FDI is not only contributing to the form of direct investment but is also something that attracts more revenue and higher labor income, which is determined as quality FDI. The policymakers should think equally about what the FDI inflow brings with it, and not just the size of the investment. The profitability and labor-intensity of incoming projects is something that helps the stock of foreign held capital in the incoming country, which again gives FDI higher quality in terms of generating labor income (Becker et al., 2012).

#### 2.2 Competition Amongst Jurisdictions

The importance of FDI drives a lot of competition amongst jurisdictions in attracting FDI and MNEs. Countries compete with each other for foreign investments by marketing their advantages in key factors such as taxation, infrastructure, and corruption. As for a lot of studies there is a pattern where larger countries with higher populations are seen as being the best host countries for establishing new headquarters in different parts of the world. Hines (2005) studied the fact that competition between countries have been stiffened substantially since the early 1980s. The larger countries found themselves in a situation that imposing a high corporate tax income would increase the amount of competitors for the same amount of mobile investments. Therefore, corporate tax policies are an outcome of greater competition between countries - both big and small. In the future this could lead to increased pressure on larger governments towards greater reductions in tax policies (Hines, 2005). Hong and Smart (2010) analyzed the theory that tax competition between governments causes a decline in tax revenues but found that the revenue and taxation generated by FDI exceeded the erosion of the corporate tax base, and that FDI benefited the welfare of citizens in both high-tax and low-tax countries.

Gnangnon (2017) investigated the effects of FDI on government tax revenue. The study examined how tax incentives include overall tax rates, but also a variety of exemption or special allowances tailored to attract specific MNEs. While a country may anticipate a decrease in their corporate tax base by offering lower corporate tax rates to MNEs, the results proved the opposite. Furthermore, they found that FDI increases tax revenue not only from corporate taxes, but also from Value Added Tax (VAT), excise, and personal income taxes.

According to Dunning (2009) the MNEs of the world are an important factor in attracting money to their respective countries. An MNE will take such big advantages from the internationalization of the world, since they can outsource their operations. Dunning (2009) mentions that the MNEs gain income from owned property and develop businesses internationally. This allows the MNEs to carry out foreign direct investment and put money in different governments. Looking at the studies and sources, we can establish a picture that market size and growth have a positive relationship with FDI and inflow of resources.

#### 2.3 Taxation Rates and Infrastructure

Hartman (1984) was one of the very first to underline the fact that FDI is affected by a lot of variables, and that lowering the tax rate in your country is not something that automatically creates more FDI. Hartman's (1984) studies showed that the studies which were previously recognized in his time, were quite different from the results he came to. More recently than Hartman's 1984 study, Hassett and Hubbard (2002) found that there was a fundamental bias towards conventional effects on the taxation rate and its effect on FDI. Furthermore, they identified that different policies on taxation have a massive potential on the effect of investment on necessary equipment and capital stock as a whole in the long run.

Goodspeed et al. (2006) indicated that in addition to lowering the taxes, a country with a good infrastructure and positive evidence of no corruption is a crucial point in FDI attraction. For that, the approach governments take is making sure that they are maintaining high investments in infrastructure, and not using revenue on consumption expenditures. Public revenues should not be kept at a low which would prove to be unsuccessful in the long run (Goodspeed et al., 2006). Investors could take a look at governments with a lot of corruption as a hurdle

and would prefer not to invest in these kinds of jurisdictions. Kaufmann's (1997) study looked at the abuse and corruption in these jurisdictions, and in some cases, he found that corruption and it's level was inconsistent and could in some cases foster more development. However, in the study he found out that investing and setting up a company in a corrupt country could amount to be as much as 20% higher than in countries with a low rate of corruption (Kaufmann, 1997). This evidence is backed up by Goodspeed et al. (2006) and shows that corruption has a big lowering impact on FDI.

#### 2.4 Tax Havens

Dharmapala and Hines (2009) found that small, well-governed countries are the most likely to have low tax rates. They explained in the study that roughly 15% of all countries in the world are seen as tax havens - however most of these are small and affluent. How one can tell that a country is a tax haven is often seen as quite a difficult journey, and there are many factors affecting this. One of the most crucial parts regarding implementation of tax incentives is by having a government which is seen as a more competent government than their predecessors (Dharmapala & Hines, 2009). Poorly governed countries often struggle with implementing new laws, with weak legislative alliances that focus on achieving and maintaining influence or a political majority. Dharmapala and Hines (2009) found in their studies that a country with a population of under one million people has a likelihood of 26% of becoming a tax haven if it is run by a poor government. However, with a competent government the odds increased to 61%. Pieretti and Paulina (2020) made an additional point, movement of activities to tax havens must be aligned with the infrastructure of the country. As backed by Dharmapala and Hines's (2009) study, Pieretti and Paulina (2020) also addressed the fact that most tax havens are small, and often lack natural resources and humanitarian services. Through specialization in offshore activities, tax havens can often attract MNEs for physical, long-term economic activities through properly investing in infrastructural provision inside the institutional frameworks (Pieretti & Paulina, 2020).

The welfare effects and the optimal response to international taxation planning is an ambiguous project. If the tax rates are too low, it gives an increase in taxation planning, and at the same time causes a rise in the optimal taxation rates of a corporation, which furthermore gives a decrease in investment by multinationals (Hong & Smart, 2010). Pieretti and Paulina (2020) found that anti-tax planning from governments could make the MNEs of the country leave. This could further lead to mitigation of tax liabilities and shifting of real-time activities to tax havens and their jurisdictions.

#### 2.5 The Study

Our primary objective in this study is to apprehend and interpret information regarding which factors are crucial in attracting, receiving and retaining FDI. FDI is an important economic factor in all nations and a crucial economic factor for economic growth in developing economies. It is interesting to look at which political variables help countries achieve their economic goals, and additionally grow furthermore thanks to FDI.

After checking empirical data from official sources, we observe differences in FDI across countries. Moreover, countries are characterized differently in terms of their political, economic and demographic factors. In this vein, we want to empirically analyze whether differences across countries in FDI are explained by differences in fiscal policies and whether other determinants can explain these differences. For that, we test statistically the following hypotheses:

**Hypothesis 1:** Contractive/expansive fiscal policy negatively/positively affects FDI.

Hypothesis 2: Political and economic factors affect FDI.

#### 3. Data and Methodology

This section contains data from the study of our research. The methodology used in our collection of data is mainly through quantitative research. We start by introducing the data collected, and then explain the different variables and the countries we analyzed.

#### 3.1 Used Variables

In our statistical analysis we firstly have to establish what kind of time frame we have taken into account, in order to create the set of variables. We determined that in order to create a sensible picture of the economic situation of a country, we should take a look at a time-period of a balanced dataset, covering a period of four years before and six years after the financial crisis of 2009. Therefore, we utilized data from the 11-year period of the years 2005 to 2015. This enabled us to use the variable "Crisis" in our regression analysis to observe differences in the data from 2005 to 2008 compared to the post-crisis years. In addition, we decided to take a closer look at three countries, which all are considered as stable economies. These countries are Austria, Ireland and Norway.

We selected a total of nine different variables, which are described and plotted as follows.

As for the variables "FDI Net", "FDI Inflow" and "FDI Outflow" we can try to explain them all together. FDI has already been thoroughly explained in the literature review as the investment from a foreign entity into businesses or productive assets in a host country. FDI Inflow indicates an increase in investments from non-residents into the host country. FDI Outflow is the amount of value moving from the host country into another foreign economy.

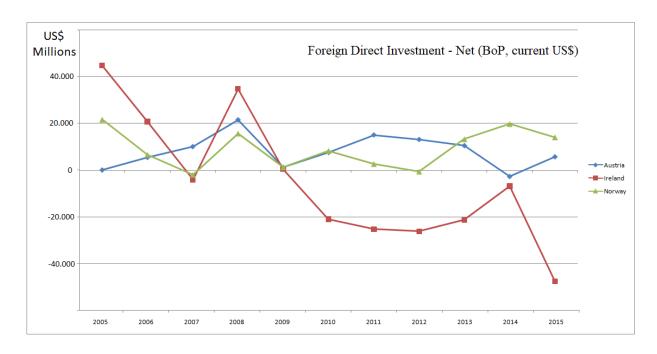


Figure 1: FDI Net (World Bank, 2023)

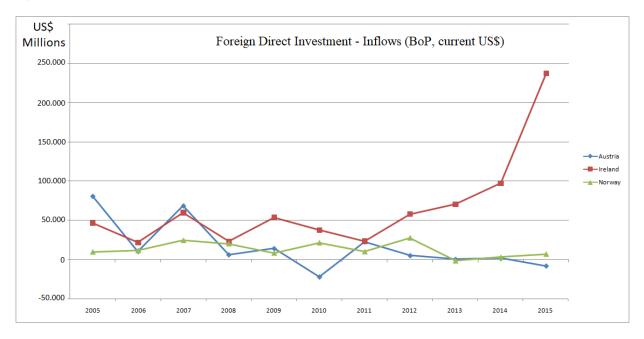


Figure 2: FDI Inflow (World Bank, 2023)

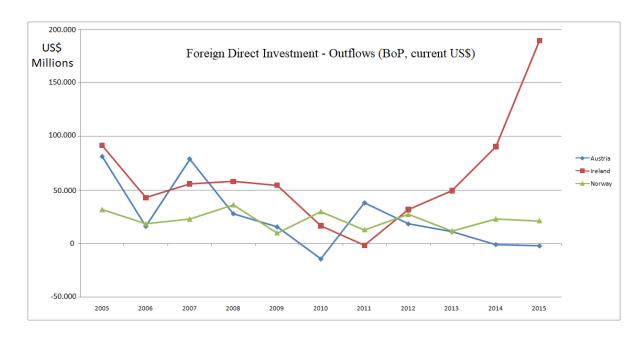


Figure 3: FDI Outflow (World Bank, 2023)

The variable "GDP" refers to the Gross Domestic Product of a given country. GDP is seen as the value a country adds through production of their services and goods; this is measured during a certain period of time.

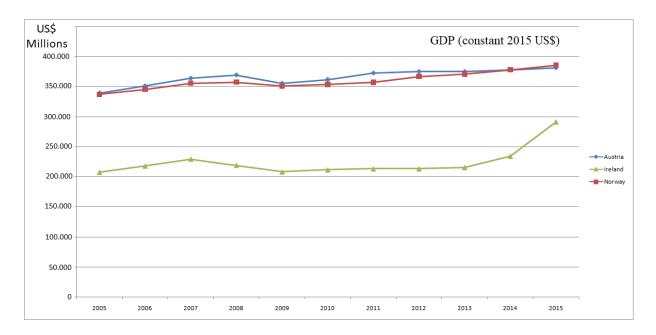


Figure 4: GDP (World Bank, 2023)

"Gross National Income" is the total income the population of the country generates, and it includes the income which is generated abroad. However, GNI subtracts the income earned by foreigners within the country.

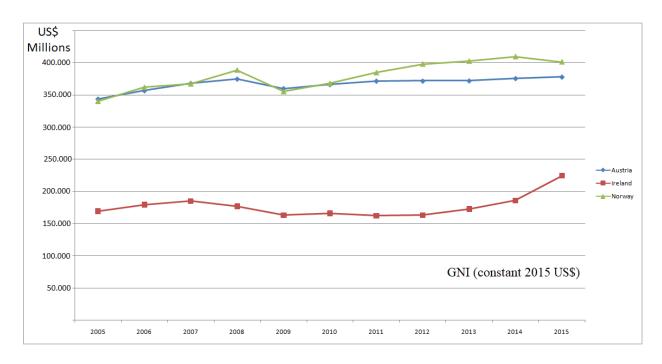


Figure 5: GNI (World Bank, 2023)

For the variable "Population" we are taking into account all persons that are residing in the country, where World Bank is our official source.

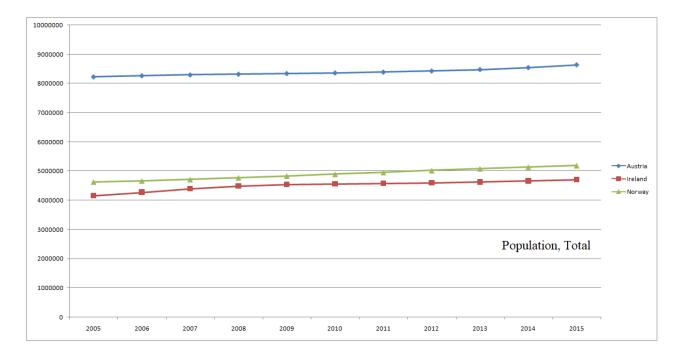


Figure 6: Population (World Bank, 2023)

"GDP per Capita" is GDP divided with the population of the given country.

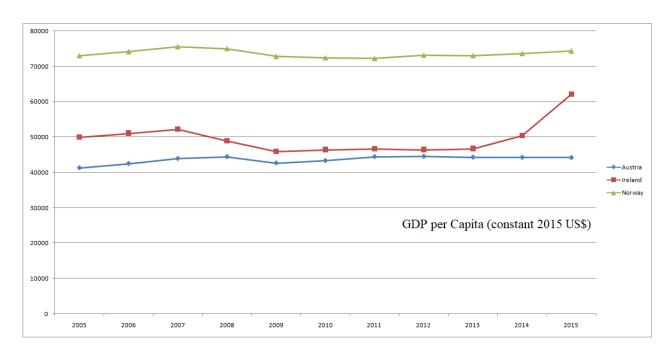


Figure 7: GDP per Capita (World Bank, 2023)

"GNI per Capita" is GNI divided with the population of the given country.

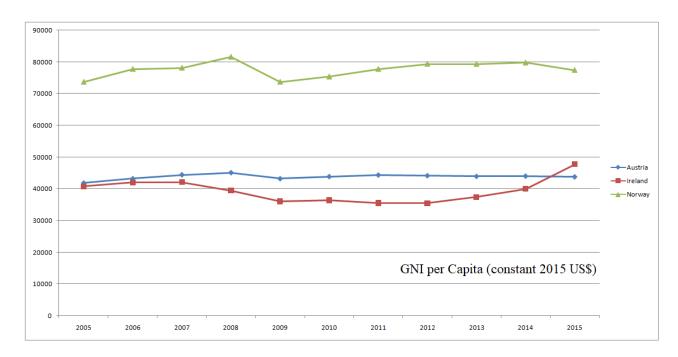


Figure 8: GNI per Capita (World Bank, 2023)

"Unemployment Rate" is a variable that can be different from country to country. Therefore, we have to make sure our source is measuring the same for each country we are using in the analysis. Unemployment rate is seen as people who are jobless, but actively seeking jobs, and are capable of working.

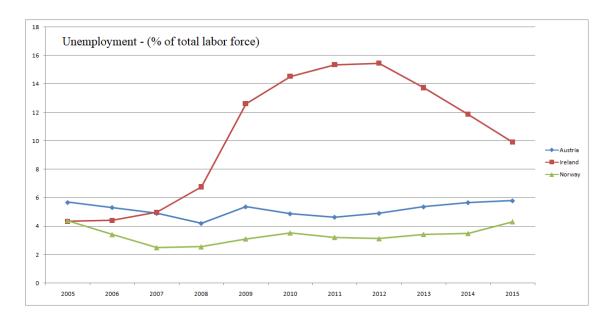


Figure 9: Unemployment Rate (World Bank, 2023)

"Labor Force Participation" provides additional clarity on employment by dividing the labor force by the total amount of working-age people in the population.

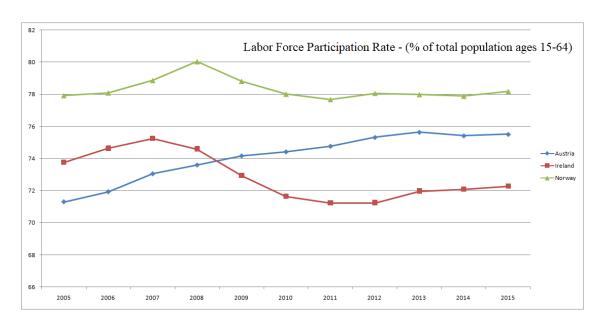


Figure 10: Labor Force Participation Rate (World Bank, 2023)

"Tax Revenue" is the amount of money a government collects from the taxpayers through all forms of various taxes. We are using Tax Revenue, as a percentage of GDP.

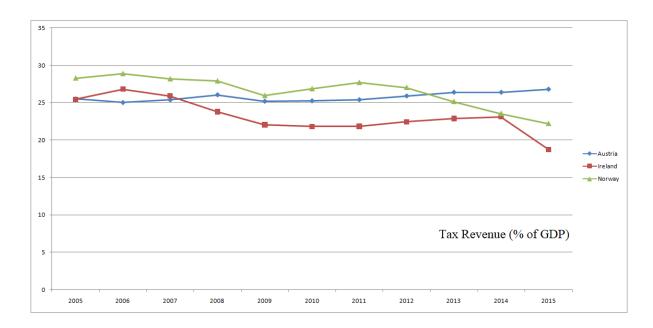


Figure 11: Tax Revenue (World Bank, 2023)

"Taxes on Income and Profits" is the tax revenue the governments are collecting from both personal income and corporate income taxation in the given country. It excludes non-income taxes such as VAT and property taxes and is measured as a percentage of total government tax revenue.

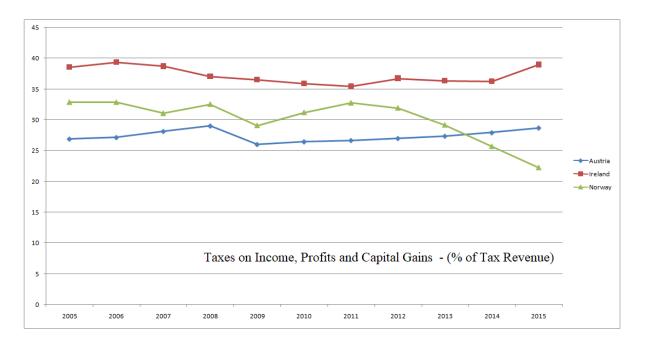


Figure 12: Taxes on Income and Profits (World Bank, 2023)

#### 3.2 **Descriptive Statistics**

In this section we examine the outcomes of the descriptive statistics from our data set. The tables include Mean, Median, Mode, Standard Deviation, Skewness, Range, Minimum and Maximum for each of the countries we used in our research. We will give a further explanation of mean and standard deviation values in the next two subchapters.

Austria								
	Mean	Median	Mode	Std. Deviation	Skewness	Range	Minimum	Maximum
FDI Net	8,064,562,554.013	7,679,700,298.124	-2,587,541,536.359	7,099,566,880.179	0.329	24,189,421,801.426	-2,587,541,536.359	21,601,880,265.066
FDI Inflow	16,495,117,228.596	6,301,143,681.983	-22,007,325,156.277	31,284,367,423.617	1.324	103,103,414,574.393	-22,007,325,156.277	81,096,089,418.116
FDI Outflow	24,559,679,782.609	16,087,848,123.849	-14,327,624,858.153	31,027,952,139.196	1.017	95,617,053,122.483	-14,327,624,858.153	81,289,428,264.330
GDP	366,179,441,471.796	369,807,747,327.812	339,655,236,682.675	12,942,629,536.992	-0.866	42,315,911,847.867	339,655,236,682.675	381,971,148,530.542
GNI	367,437,740,847.972	371,941,368,354.306	344,054,760,410.049	10,089,550,117.469	-1.388	34,155,438,989.756	344,054,760,410.049	378,210,199,399.80
Population	8,391,881.090	8,363,404.000	8,227,829.000	124,689.312	0.790	414,870.000	8,227,829.000	8,642,699.000
GDP per Capita	43,626.031	44,195.818	41,281.271	1,060.982	-1.292	3,268.611	41,281.271	44,549.882
GNI per Capita	43,781.406	43,907.163	41,815.983	842.987	-1.107	3,254.291	41,815.983	45,070.275
Unemployment	5.159	5.320	4.910	0.495	-0.518	1.600	4.200	5.800
Labor Force Part. Rate	74.103	74.420	71.300	1.485	-0.849	4.340	71.300	75.640
Tax Rev % GDP	25.778	25.514	25.050	0.587	0.549	1.776	25.050	26.826
Taxes on Income/Profits	27.392	27.147	26.006	0.953	0.443	3.024	26.006	29.030
Ireland								
	Mean	Median	Mode	Std. Deviation	Skewness	Range	Minimum	Maximum
FDI Net	-4,601,667,680.879	-6,747,671,077.874	-47,433,558,092.543	28,199,385,743.588	0.506	92,273,512,794.364	-47,433,558,092.543	44,839,954,701.821
FDI Inflow	66,459,994,310.980	53,974,309,647.053	22,070,063,905.101	61,003,164,570.918	2.538	214,990,161,023.758	22,070,063,905.101	237,060,224,928.859
FDI Outflow	61,858,326,630.101	54,515,156,835.824	-1,523,057,492.850	50,601,904,400.287	1.655	191,149,724,329.167	-1,523,057,492.850	189,626,666,836.317
GDP	224,049,354,242.378	215,925,533,436.555	207,798,116,295.994	23,954,119,654.593	2.657	83,977,050,210.896	207,798,116,295.994	291,775,166,506.891
GNI	177,342,322,420.366	173,074,571,201.826	162,591,226,593.954	17,889,410,315.165	2.051	62,017,541,122.799	162,591,226,593.954	224,608,767,716.753
Population	4,507,331.910	4,560,155.000	4,159,914.000	166,984.869	-1.110	542,043.000	4,159,914.000	4,701,957.000
GDP per Capita	49,693.871	48,879.228	45,919.683	4,649.345	2.101	16,134.302	45,919.683	62,053.984
GNI per Capita	39,361.149	39,458.861	35,460.263	3,757.233	1.041	12,308.947	35,460.263	47,769.209
Unemployment	10.358	11.860	4.340	4.478	-0.338	11.110	4.340	15.450
Labor Force Part. Rate	72.875	72.280	71.230	1.458	0.495	4.020	71.230	75.250
Tax Rev % GDP	23.187	22.908	18.770	2.264	-0.127	8.049	18.770	26.819
Taxes on Income/Profits	37.288	36.754	35.483	1.384	0.415	3.906	35.483	39.389
Norway								
	Mean	Median	Mode	Std. Deviation	Skewness	Range	Minimum	Maximum
FDI Net	9,208,941,729.075	8,307,773,566.307	-1,881,082,807.348	8,257,725,319.538	0.116	23,557,350,684.233	-1,881,082,807.348	21,676,267,876.886
FDI Inflow	13,175,730,377.792	10,296,323,075.697	-1,368,607,170.840	9,293,528,536.607	0.207	29,266,575,498.773	-1,368,607,170.840	27,897,968,327.933
FDI Outflow	22,384,672,106.868	22,925,008,295.341	9,968,098,526.789	8,551,505,773.247	0.029	26,357,993,105.717	9,968,098,526.789	36,326,091,632.506
GDP	360,290,995,518.896	357,587,103,441.149	337,670,104,371.189	14,169,085,443.604	0.363	48,131,445,695.980	337,670,104,371.189	385,801,550,067.169
GNI	380,305,670,498.933	385,210,347,008.370	340,818,756,308.773	22,453,111,479.537	-0.332	69,088,475,601.943	340,818,756,308.773	409,907,231,910.716
Population	4,896,039.450	4,889,252.000	4,623,291.000	195,287.562	0.083	565,316.000	4,623,291.000	5,188,607.000
GDP per Capita	73,597.313	73,178.785	72,194.781	1,088.964	0.639	3,429.660	72,194.781	75,624.441
GNI per Capita	77,644.400	77,771.871	73,717.782	2,497.907	-0.388	7,893.932	73,717.782	81,611.714
Unemployment	3.361	3.400	2.490	0.594	0.387	1.890	2.490	4.380
Labor Force Part. Rate	78.319	78.060	77.670	0.680	1.886	2.370	77.670	80.040
Tax Rev % GDP	26.538	27.045	22.224	2.118	-1.046	6.686	22.224	28.909
Taxes on Income/Profits	30.138	31.202	22.248	3.419	-1.527	10.627	22.248	32.875
If multiple modes exist th	nen the smallest v	alue is shown.						

Table 1: Descriptive Statistics

#### **3.2.1 Means**

The mean of the variable FDI Net shows that Austria and Norway have quite the similar value. Ireland sticks out with having quite a large negative net value of FDI. In this case, the negative value is positive, since it indicates that the country has a larger value of inflow than outflow.

FDI Inflow and FDI Outflow have a similar picture, Ireland has as much as twice the value in FDI inflow and outflow as both Austria and Norway combined.

GDP and GNI indicate that Ireland has less production of goods inside the borders of the country than the countries we are comparing it with.

For Population we see that there is not a big difference in how many people are living inside the borders of the countries. Austria is the largest country of the three, at roughly twice as big as both Ireland and Norway.

With a GDP per capita of 73.597\$ the Norwegian population has far more capital than the two other countries, which are quite similar at around 45.000\$. GNI per Capita quite similar to GDP per Capita. However, we can see that in Ireland the mean of GNI per Capita is around 10.000\$ less than the GDP per Capita. Again, we see that Norway has a much higher GNI per capita at 77.644\$.

The Unemployment rate value is a bit spread in the countries, but Ireland (10,35%) is more than double both Austria and Norway. However, the mean of the Labor Force Participation rate is putting Ireland in a brighter light with a participation rate of 72,9%, only slightly below Austria (74,1%) and Norway (78,3%).

The final two variables measure taxation, with the government Tax Revenue as a percentage of GDP and then the Taxes on Income and Profits as a percentage of all government tax revenue. The means for total Tax Revenue are quite similar. However, with Taxes on Income and Profits it is noteworthy to see Ireland at 37% compared to Austria's 27% and Norway's 30%, especially considering Ireland's reputation as a corporate tax haven.

#### 3.2.2 Standard Deviation

The standard deviation of the variable FDI Net for Ireland is the one that sticks out and needs interpretation. While Norway and Austria have a low number, Ireland has almost twice the value with both the other countries added together.

FDI Inflow and FDI Outflow shows that Norway and Austria have quite similar values in both outflow and inflow, while Ireland has a lot more inflow than outflow. Austria has high numbers in comparison to their FDI Net, which is also something that can be taken into account when looking at the table.

GDP and GNI have no clear picture, and none of the countries stand out in neither a positive nor a negative way.

Population is also something that shows a similar picture in all three countries. Austria has the least difference, while Norway has the highest. This is also expected, as Austria is the country with the largest population, and therefore has a more stable population, while Norway is the least populated country and has a more stable rise in population.

GDP per Capita shows that Ireland has the most deviation in GDP per Capita value (4.649\$). This is also the same for GNI per Capita, as the value is (3.757\$) for Ireland. As for the biggest difference between GDP and GNI per Capita, Norway has around 1.500\$ larger value in their GNI per Capita, while the other countries have more stable values with a bit less GNI per Capita than GDP per Capita.

The Unemployment rate is stable for Austria and Norway, but the value for Ireland is quite high (4,8%). However, looking at the standard deviation for Labor Force Participation, Ireland is showing more stability. In labor force participation Austria has the highest participation value (1,48%), slightly higher than Ireland (1,46%).

For the last two taxation variables the standard deviation is similar for the countries. However, Austria has the lowest rates (0,6% and 0,95%), while Norway has the highest (2,1% and 3,42%). Ireland has somewhere in between, with high standard deviation on their Tax Revenue (2,3%) and a low deviation on Taxes on Income and Profits (1,4%).

#### 3.3 Statistical Analysis

In order to test out our hypotheses we used some statistical analysis. The Pearson correlation was used in order to find out if variables are related, and how strong the relationship between the pair of variables are. Relationships can be positive or negative (-1  $\leq$  r  $\leq$ 1). The significance was used at the level of .01 or .05.

After the Pearson correlation we ran a linear regression in order to study the determinants of the dependent variables, using a set of regressors which were independent.

#### 3.3.1 Correlation

This section will take the numeral outcomes from the correlations and thereafter interpret the ones that are the most outstanding and statistically significant.

Austria	1												
		FDI Net	FDI Inflow	FDI Outflow	GDP	GNI	Population	GDP per Capita	GNI per Capita	Unemployment	Labor Force Part. Rate	Tax Rev % GDP	Taxes on Income/Profits
FDI Net	Pearson Correlation	1.000	-0.149	0.078	0.349	0.443	-0.114	0.586	,728*	-,872**	0.148	0.044	0.327
	Signifcance (2-tailed)		0.661	0.819	0.293	0.173	0.739	0.058	0.011	0	0.665	0.899	0.326
	N		11	11	11	11	11	11	11	11	11	11	11
FDI Inflow	Pearson Correlation		1.000	,974**	-0.583	-,608*	-0.596	-0.489	-0.414	0.081	-,685*	-0.353	-0.028
	Signifcance (2-tailed)			0	0.06	0.047	0.053	0.127	0.205	0.813	0.02	0.286	0.935
	N			11	11	11	11	11	11	11	11	11	11
FDI Outflow	Pearson Correlation			1.000	-0.508	-0.511	-,627*	-0.359	-0.251	-0.118	-,657*	-0.346	0.047
	Signifcance (2-tailed)				0.111	0.108	0.039	0.278	0.456	0.73	0.028	0.297	0.891
	N				11	11	11	11	11	11	11	11	11
GDP	Pearson Correlation				1.000	,971**	,848**	,943**	,741**	-0.125	,901**	,741**	0.466
	Signifcance (2-tailed)					0	0.001	0	0.009	0.713	0	0.009	0.149
	N					11	11	11	11	11	11	11	11
GNI	Pearson Correlation					1.000	,753**	,961**	,858**	-0.278	,834**	,657*	0.535
	Signifcance (2-tailed)						0.007	0	0.001	0.408	0.001	0.028	0.09
	N						11	11	11	11	11	11	11
Population	Pearson Correlation						1.000	,623*	0.308	0.377	,859**	,838**	0.347
	Signifcance (2-tailed)							0.04	0.358	0.253	0.001	0.001	0.295
	N							11	11	11	11	11	11
GDP per Capita	Pearson Correlation							1.000	,901**	-0.423	,791**	0.565	0.467
	Signifcance (2-tailed)								0	0.195	0.004	0.07	0.148
	N								11	11	11	11	11
GNI per Capita	Pearson Correlation								1.000	-,696*	0.535	0.294	0.501
	Signifcance (2-tailed)									0.017	0.09	0.38	0.116
	N									11	11	11	11
Unemployment	Pearson Correlation									1.000	0.015	0.294	-0.105
	Signifcance (2-tailed)										0.965	0.381	0.758
	N										11	11	11
Labor Force Part. Rate	Pearson Correlation										1.000	,645*	0.103
	Signifcance (2-tailed)											0.032	0.764
	N											11	11
Tax Rev % GDP	Pearson Correlation											1.000	,651*
	Signifcance (2-tailed)												0.03
	N												11
Taxes on Income/Profits	Pearson Correlation												1.000
	Signifcance (2-tailed)												
	N												

Pearson Correlation Significance

\* Correlation is significant at the 0,05 level (2-tailed)

\*\* Correlation is significant at the 0,01 level (2-tailed)

Table 2: Correlations - Austria.

Source: Own development

		FDI Net	FDI Inflow	FDI Outflow	GDP	GNI	Population	GDP per Capita	GNI per Capita	Unemployment	Labor Force Part. Rate	Tax Rev % GDP	Taxes on Income/Profits
FDI Net	Pearson Correlation	1,000	-0.569	-0.128	-0.497	-0.314	822**	-0.226	0.006	715*	.707*	.758**	0.314
	Significance (2-tailed)		0.068	0.707	0.12	0.347	0.002	0.503	0.986	0.013	0.015	0.007	0.346
	N		11	11	11	11	11	11	11	11	11	11	11
FDI Inflow	Pearson Correlation		1,000	.889**	.936**	.877**	0.503	.835**	.699*	0.056	-0.221	-,646*	0.318
	Signifcance (2-tailed)			0	0	0	0.115	0.001	0.017	0.871	0.514	0.032	0.341
	N			11	11	11	11	11	11	11	11	11	11
FDI Outflow	Pearson Correlation			1.000	,851**	,883**	0.148	,881**	,846**	-0.332	0.127	-0.356	0.559
	Signifcance (2-tailed)				0.001	0	0.663	0	0.001	0.319	0.709	0.283	0.074
	N				11	11	11	11	11	11	11	11	11
GDP	Pearson Correlation				1.000	,969**	0.437	,935**	,821**	-0.108	-0.034	-0.53	0.427
	Signifcance (2-tailed)					0	0.179	0	0.002	0.751	0.922	0.094	0.19
	N					11	11	11	11	11	11	11	11
GNI	Pearson Correlation					1.000	0.268	,968**	,922**	-0.318	0.173	-0.335	0.574
	Signifcance (2-tailed)						0.425	0	0	0.341	0.612	0.315	0.065
	N						11	11	11	11	11	11	11
Population	Pearson Correlation						1.000	0.089	-0.125	,772**	-,693*	-,824**	-0.566
	Signifcance (2-tailed)							0.795	0.714	0.005	0.018	0.002	0.069
	N							11	11	11	11	11	11
GDP per Capita	Pearson Correlation							1.000	,960**	-0.428	0.24	-0.254	,699*
	Signifcance (2-tailed)								0	0.19	0.476	0.45	0.017
	N								11	11	11	11	11
GNI per Capita	Pearson Correlation								1.000	-,639*	0.459	-0.007	,819**
	Signifcance (2-tailed)									0.034	0.156	0.985	0.002
	N									11	11	11	11
Unemployment	Pearson Correlation									1.000	-,925**	-,688*	-,841**
	Signifcance (2-tailed)										0	0.019	0.001
	N										11	11	11
Labor Force Part. Rate	Pearson Correlation										1.000	,726*	,698*
	Signifcance (2-tailed)											0.011	0.017
	N											11	11
Tax Rev % GDP	Pearson Correlation											1.000	0.407
	Signifcance (2-tailed)												0.215
	N												11
Taxes on Income/Profits	Pearson Correlation												1.000
	Signifcance (2-tailed)												
	N												

Table 3: Correlations - Ireland.

Source: Own development

N	0	r	W	a	y

		FDI Net	FDI Inflow	FDI Outflow	GDP	GNI	Population	GDP per Capita	GNI per Capita	Unemployment	Labor Force Part. Rate	Tax Rev % GDP	Taxes on Income/Profits
FDI Net	Pearson Correlation	1.000	-0.531	0.389	0.146	0.138	0.135	0.01	0.073	0.578	-0.05	-0.345	-0.301
	Signifcance (2-tailed)		0.093	0.237	0.668	0.686	0.693	0.978	0.831	0.063	0.884	0.298	0.369
	N		11	11	11	11	11	11	11	11	11	11	11
FDI Inflow	Pearson Correlation		1.000	0.574	-0.278	-0.201	-0.378	0.294	0.114	-0.499	0.377	0.536	0.485
	Signifcance (2-tailed)			0.065	0.407	0.554	0.251	0.38	0.738	0.119	0.253	0.089	0.13
	N			11	11	11	11	11	11	11	11	11	11
FDI Outflow	Pearson Correlation			1.000	-0.162	-0.085	-0.281	0.329	0.195	0.016	0.362	0.249	0.237
	Signifcance (2-tailed)				0.635	0.804	0.402	0.324	0.566	0.962	0.274	0.46	0.483
	N				11	11	11	11	11	11	11	11	11
GDP	Pearson Correlation				1.000	,913**	,932**	0.138	0.527	0.104	-0.122	-,867**	-,816**
	Signifcance (2-tailed)					0	0	0.686	0.096	0.761	0.721	0.001	0.002
	N					11	11	11	11	11	11	11	11
GNI	Pearson Correlation					1.000	,866**	0.093	,772**	-0.097	-0.077	-,646*	-0.536
	Signifcance (2-tailed)						0.001	0.786	0.005	0.778	0.822	0.032	0.089
	N						11	11	11	11	11	11	11
Population	Pearson Correlation						1.000	-0.229	0.351	0.234	-0.352	-,869**	-,748**
	Signifcance (2-tailed)							0.497	0.29	0.488	0.289	0.001	0.008
	N							11	11	11	11	11	11
GDP per Capita	Pearson Correlation							1.000	0.471	-0.382	,638*	0.055	-0.136
	Signifcance (2-tailed)								0.144	0.246	0.035	0.872	0.69
	N								11	11	11	11	11
GNI per Capita	Pearson Correlation								1.000	-0.488	0.314	-0.107	-0.055
	Signifcance (2-tailed)									0.127	0.347	0.754	0.871
	N									11	11	11	11
Unemployment	Pearson Correlation									1.000	-,620*	-0.418	-0.408
	Signifcance (2-tailed)										0.042	0.201	0.213
	N										11	11	11
Labor Force Part. Rate	Pearson Correlation										1.000	0.216	0.143
	Signifcance (2-tailed)											0.523	0.675
	N											11	11
Tax Rev % GDP	Pearson Correlation											1.000	,963**
	Signifcance (2-tailed)												0
	N												11
Taxes on Income/Profits	Pearson Correlation												1.000
	Signifcance (2-tailed)												
	N												

Table 4: Correlations - Norway.

Source: Own development

Pearson Correlation Significance
\* Correlation is significant at the 0,05 level (2-tailed)
\*\* Correlation is significant at the 0,01 level (2-tailed)

Pearson Correlation Significance

\* Correlation is significant at the 0,05 level (2-tailed)

\*\* Correlation is significant at the 0,01 level (2-tailed)

Beginning with an analysis of the correlations with the three FDI measures we first observe that in Norway there were no significant correlations between any variables and FDI Net, FDI Inflow or FDI Outflow. We observe that FDI Net had a negative correlation with Unemployment in both Austria (r=-0,872) and Ireland (r=-0,715), reflecting lower unemployment during higher FDI. In Austria FDI Net also had a positive correlation with GNI per Capita with r=0,728. In Ireland FDI Net was also positively correlated with both the Labor Force Participation Rate (r=0,707) and Tax Revenue as a % of GDP (r=0,758). Ireland also had a strong negative correlation between FDI Net and Population with r=-0,822. While isolating FDI Inflow we observe that it had a negative correlation with GNI in Austria (r=-0,608) but a strong positive correlation in Ireland (r=0,877). In Austria FDI Inflow had a negative correlation with Labor Force Participation with r=-0,685. In Ireland FDI Inflow also had positive correlations with GNI per Capita (r=0,699), GDP (r=0,936), and GDP per Capita (r=0,835). In Ireland FDI Inflow had a negative correlation with Tax Revenue as a % of GDP with r=-0,646. In Austria FDI Outflow had a negative correlation with Labor Force Participation (r=-0,657), revealing that in Austria Labor Force Participation had a negative correlation to both FDI Inflow and FDI Outflow. Austria also had a negative correlation between FDI Outflow and Population with r=-0,627. In Ireland FDI Outflow had strong positive correlations with GDP (r=0,851), GDP per Capita (r=0,881), GNI (r=0,833), and GNI per Capita (r=0,846). Finally, we observe that FDI Inflow had a strong positive correlation with FDI Outflow in both Austria (r=0,974) and Ireland (r=0,889). This was the only significant correlation between the three measures of FDI.

Moving to the other variable we observe that GDP and GNI are strongly correlated in all countries, which is expected since GNI is calculated by adjusting the GDP to account for factor incomes. In Austria GDP had a positive correlation with GNI with r=0,971. In Ireland GDP had a positive correlation with GNI with r=0,969. In Norway GDP had a positive correlation with GNI with r=0,913. In Austria we observe strong correlations between the Labor Force Participation Rate and both GDP (r=0,901) and GNI (r=0,834). Population has a strong correlation with Tax Revenue as a % of GDP in all three countries, however the correlation is positive in Austria (r=0,838) but negative in both Ireland (r=-0,824)

and Norway (r=-0,869). Population had strong positive correlations with both GDP and GNI in both Austria and Norway, but no significant correlations with GDP or GNI in Ireland. In Ireland Population had a positive correlation with Unemployment with r=0,772. Norway had a strong negative correlation between Taxes on Income and Profits as a % of Revenue and both Population (r=-0,748) and GDP (r+-0,816). The final noteworthy and significant Population correlation was with the Labor Force Participation Rate. Population and Labor Force Participation had a strong positive correlation in Austria (r=0,859) but a negative correlation in Ireland (r=-0,693) and no significant correlation in Norway. GDP per Capita had a positive correlation with Labor Force Participation in both Austria (r=0,791) and Norway (r=0,638). In Ireland Taxes on Income and Profits as a % of Revenue had a positive correlation with both GDP per Capita (r=0,699) and GNI per Capita (r=0,819). GNI per Capita had a negative correlation with Unemployment in both Austria (r=-0,696) and Ireland (r=-0,639). The Unemployment rate had a negative correlation with Labor Force Participation rate in both Ireland (r=-0,925) and Norway (r=-0,62). In Ireland Unemployment had negative correlations with both Tax Revenue as a % of GDP (r=-0,688) and Taxes on Income and Profits as a % of Revenue (r=-0,841).

In reviewing the remaining taxation variable, we observe that in Ireland the Labor Force Participation rate had a positive correlation with Taxes on Income and Profits as a % of Revenue with r=0,698. The Labor Force Participation rate also had positive correlations with Tax Revenue as a % of GDP in both Austria (r=0,645) and Ireland (r=0,726). Tax Revenue as a % of GDP had a strong positive correlation with GDP in Austria (r=0,741) but a strong negative correlation in Norway (r=-0,867). The correlation between Tax Revenue as a % of GDP and GNI is also positive in Austria (r=0,657) but negative in Norway (r=-0,646). Finally, we observe that Tax Revenue as a % of GDP has a positive correlation with Taxes on Income and Profits as a % of Revenue for both Austria (r=0,651) and Norway (r=0,963).

#### 3.3.2 Regression Analysis

To investigate the research question, we continue our statistical analysis by running multiple linear regression, which general formulation is:

$$Y_t = \beta_0 + \beta_1 \cdot x_{1t} + \beta_2 \cdot x_{2t} + \cdots + \beta_k \cdot x_{kt} + \varepsilon_t \quad \text{(eq. 1)}$$

Where  $Y_t$  is the dependent variable,  $x_{1t}, x_{2t},...$  and  $x_{kt}$  are independent variables or regressors with corresponding parameters  $\beta_0, \beta_1, \beta_2,..., \beta_k$ , respectively, and the error term denoted by  $\varepsilon_t$ . Subscript t indicates the year of the observation in the dataset and the subscript k classifies the regressor at stake. We estimate the model using Ordered Least Squared method (OLS, hereafter), such that it becomes:

$$\widehat{Y}_t = \widehat{\beta_0} + \widehat{\beta_1} \cdot x_{1t} + \widehat{\beta_2} \cdot x_{2t} + \cdots \widehat{\beta_k} \cdot x_{kt}$$
 (eq. 2)

In our context, multiple linear regression is:

$$FDI_{net_t} = \beta_0 + \beta_1 \cdot GNI_t + \beta_2 \cdot Pop_t + \beta_3 \cdot Unemp_t + \beta_4 \cdot LabF_t + \beta_4 \cdot TaxInc_t + \beta_5 \cdot Crisis_t + \varepsilon_t$$
eq. (3)

where the set of independent variables used in the econometric model has been selected with the aim to avoid multicollinearity that come from the statistically significant correlations among these variables. Moreover, since we investigate FDI in Austria, Ireland, and Norway we run the multiple linear regression model for each country separately as:

$$FDI_{net_{t}}^{A} = \beta_{0} + \beta_{1} \cdot GNI_{t}^{A} + \beta_{2} \cdot Pop_{t}^{A} + \beta_{3} \cdot Unempl_{t}^{A} + \beta_{4} \cdot LabF_{t}^{A} + \beta_{4} \cdot TaxInc_{t}^{A} + \beta_{5} \cdot Crisis_{t}^{A} + \varepsilon_{t}^{A}$$

$$eq. (4)$$

$$FDI_{net_{t}}^{I} = \beta_{0} + \beta_{1} \cdot GNI_{t}^{I} + \beta_{2} \cdot Pop_{t}^{I} + \beta_{3} \cdot Unempl_{t}^{I} + \beta_{4} \cdot LabF_{t}^{I} + \beta_{4} \cdot TaxInc_{t}^{I} + \beta_{5} \cdot Crisis_{t}^{I} + \varepsilon_{t}^{I}$$

$$eq. (5)$$

$$FDI_{net_{t}}^{N} = \beta_{0} + \beta_{1} \cdot GNI_{t}^{N} + \beta_{2} \cdot Pop_{t}^{N} + \beta_{3} \cdot Unempl_{t}^{N} + \beta_{4} \cdot LabF_{t}^{N} + \beta_{4} \cdot TaxInc_{t}^{N} + \beta_{5} \cdot Crisis_{t}^{N} + \varepsilon_{t}^{N}$$

$$eq. (6)$$

where the superscripts *A, I, N* indicate the country, Austria, Ireland, and Norway, respectively. To do so, we previously run ANOVA test to check if FDI actually

differs across countries on average (F=5.632, Sig=0.045). The estimated OLS models in equations 4, 5, and 6 were obtained using statistical software SPSS, which outcomes for Austria, Ireland and Norway are provided in tables 5, 6 and 7 respectively. The significance levels are: \* at 0.1 (10 %), \*\* at 0.05 (5 %), and \*\*\* at 0.01 (1 %)

Dependent variable FDI <sup>Austria</sup>	Estimated Coefficients	Std. Error	t	Sig.
(Constant)	-1.250.871.018.560**	394054796601	-3,174	0,034
GNI	-1,188*	0,436	-2,725	0,053
Population	178.871,69**	59774,853	2,992	0,04
Unemployment	-28.942.262.856***	5794677419	-4,995	0,008
Labor Force Participation	8.785.646.444*	3565522313	2,464	0,069
Taxes on Income/Profits	-10.168.517.421	5063296873	-2,008	0,115
Crisis	-45.360.171.722**	16008438012	-2,834	0,047
Adjusted R-squared	0.891			

Table 5: Dependent Variable FDI Net Austria

Dependent variable $FDI_{net_t}^{Ireland}$	Estimated Coefficients	Std. Error	t	Sig.
(Constant)	1.365.106.884.505*	596242308242	2,29	0,084
GNI	-2,407*	1,132	-2,126	0,100
Population	205.499,837	141826,634	1,449	0,221
Unemployment	-23.756.209.153**	8484546206	-2,8	0,049
Labor Force Participation	-20.367.755.168	11521739476	-1,768	0,152
Taxes on Income/Profits	-4.219.557.564	8282838935	-0,509	0,637
Crisis	29.165.137.691	28736115191	1,015	0,368
Adjusted R-squared	0.866			

Table 6: Dependent Variable FDI Net Ireland

Dependent variable $FDI_{net_t}^{Norway}$	Estimated Coefficients	Std. Error	t	Sig.
(Constant)	1.853.399.111	840840534082	0,002	0,998
GNI	0,994	0,936	1,063	0,348
Population	-163.985,074	192768,351	-0,851	0,443
Unemployment	21.058.787.026*	9492171161	2,219	0,091
Labor Force Participation	4.958.641.026	5466429032	0,907	0,416
Taxes on Income/Profits	-1.331.718.737	2414224386	-0,552	0,611
Crisis	20.540.908.691	30998432737	0,663	0,544
Adjusted R-squared	0.750			

Table 7: Dependent Variable FDI Net Norway

It is worth mentioning, that we rerun the multiple linear regressions for other dependent variables like  $FDI_{inflow_t}$  and  $FDI_{outflow_t}$  for each country and report them in the estimated models provided in Tables 8 to 14 in the Appendix.

As seen in Tables 5 to 7 we ran regression with the dependent variable FDI Net for the three countries. From the estimated models, we can see that some of the independent variables are statistically significant – which in this case means that they have an impact on the dependent variable. In both Austria and Ireland, GNI and the Unemployment rate have a negative impact on FDI Net as a variable. In Austria we can see that Population and Labor Force Participation have a positive impact, while Crisis has a negative impact.

As seen in Table 7 Norway only had one independent variable that was significant, the Unemployment rate had a positive impact on FDI Net. As seen in Table 14 from the appendix, we also performed the regression for Norway using GDP instead of GNI, to identify significant coefficients that better explained the model. While the independent variables for Norway with GNI (Table 7) only had one significant coefficient from Unemployment rate, we can see from Table 14 that FDI Net has more significant coefficients when running the regression against GDP. GDP, Population, Taxes on Income and Profits, and Crisis were all significant towards FDI Net in Norway.

#### 4. Conclusion

The results of our research and empirical analysis indicate that our first hypothesis about the effects of fiscal policy on FDI has been confirmed in our regression analysis. The regression performed to analyze FDI points out that taxes on income and profits, as a percentage of total government tax revenue, have a negative impact on FDI in Norway. In addition, we also find a set of significant correlations with the two measured taxation variables. Our results on the percentage of Ireland's taxes on income and profits compared to Austria's and Norway's are in line with Hong and Smart's article (2010). Hong and Smart's article (2010) analyzed how the tax competition between governments causes a decline in tax revenues and found that the revenue and taxation generated by FDI exceeded the erosion of the corporate tax base, and that FDI benefited the welfare of citizens in both high-tax and low-tax countries. What we observe in our study is that, all three countries have a good income from taxation on income and profits, which further proves that it is beneficial for both high-taxation countries, and low-taxation countries. Furthermore, Gnangnon (2017) investigated the effects of FDI on government tax revenue. The study examined how tax incentives include overall tax rates, but also a variety of exemption or special allowances tailored to attract specific MNEs. While a country may anticipate a decrease in their corporate tax base by offering lower corporate tax rates to MNEs, the results proved the opposite. Furthermore, they found that FDI increases tax revenue not only from corporate taxes, but also from VAT, excise, and personal income taxes. This is further explained when looking at the tax revenue as a percentage of GDP. This independent variable in the multiple regression model had a strong positive and significant relationship with GDP in Austria, but a strong negative and significant correlation in Norway indicating a decline of tax revenue in Norway.

As for our second hypothesis, regarding political and economic factors as determinants of FDI, from our regression analysis we find that GNI, Population, Unemployment and Labor Force Participation rate actually explain net FDI. While using GNI for explaining net FDI in Austria and Ireland, in Norway the regression model uses GDP as independent variable. Moreover, in Norway we observe the

negative effect of Crisis on FDI. The inclusion of the dummy variable Crisis was designed to capture a change in the economic status, together with the time variation of the data set. This result suggests that FDI suffers from the Crisis that reflects the economic and investment market situation in the country.

Finally, our study serves to give insight for fiscal policy, which implications are related to increase FDI as a possible governmental macroeconomic goal. Moreover, it is worth mentioning that our research contributes knowledge to the existing literature on FDI and its relationship with several fiscal and economic factors, but our results are not final nor complete, and further research is needed. Moreover, our study can be improved methodologically. That is, further research might not only take into account the time variation of the data and its implication on the dependent variable when running a dynamic regression analysis, but also calibrate the period of time considered for the study.

#### **Sources**

Becker, J., Fuest, C., & Riedel, N. (2012). Corporate tax effects on the quality and quantity of FDI. *European Economic Review*, *56*(8), 1495-1511.

Dharmapala, D., & Hines Jr, J. R. (2009). Which countries become tax havens?. *Journal of Public Economics*, 93(9-10), 1058-1068.

Dunning, J. H. (2015). The eclectic paradigm as an envelope for economic and business theories of MNE activity. In *International Business Strategy* (pp. 60-84). Routledge.

European Commission (2022). <a href="https://trade.ec.europa.eu/access-to-markets/en/content/types-investment">https://trade.ec.europa.eu/access-to-markets/en/content/types-investment</a>

Goodspeed, T., Martinez-Vazquez, J., & Zhang, L. (2006). Are other government policies more important than taxation in attracting FDI?. *Andrew young School of policy studies research paper*, (06-28).

Hassett, K. A., & Hubbard, R. G. (1997). Tax policy and investment. *Fiscal Policy:* Lessons from Economic Research, 339-385.

Hartman, D. G. (1984). Tax policy and foreign direct investment in the United States. *National tax journal*, *37*(4), 475-487.

Hines Jr, J. R. (2005). Corporate taxation and international competition. *Ross School of Business Paper*, (1026).

Hong, Q., & Smart, M. (2010). In praise of tax havens: International tax planning and foreign direct investment. *European economic review*, *54*(1), 82-95.

Júlio, P., Pinheiro–Alves, R., & Tavares, J. (2013). Foreign direct investment and institutional reform: evidence and an application to Portugal. *Portuguese Economic Journal*, *12*, 215-250.

Kaufmann, D. (1997). Corruption: the facts. Foreign policy, 114-131.

Kimm Gnangnon, S. (2017). Impact of foreign direct investment (FDI) inflows on non-resource tax and corporate tax revenue. *Economics Bulletin*, *37*(4), 2890-2904.

OECD. (2022) https://data.oecd.org/fdi/fdi-stocks.htm

Pieretti, P., & Pulina, G. (2020). Does eliminating international profit shifting increase tax revenue in high-tax countries?. *Economic Modelling*, 93, 717-727.

Simões, A. J., Ventura, J., & Coelho, L. A. (2014). Foreign Direct Investment and Fiscal Policy-A Literature Survey. *CEFAGE-UE Working Papers*, (2014\_11).

The World Bank (2023). <a href="https://data.worldbank.org/">https://data.worldbank.org/</a>

### **Appendix**

Dependent variable FDI <sup>Austria</sup>	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	1,27657E+12	5,46391E+12	0,234	0,827
GNI	-0,983	6,043	-0,163	0,879
Population	-313836,672	828830,201	-0,379	0,724
Unemployment	33867754665	80348229860	0,422	0,695
Labor Force Participation	14858174181	49439060312	0,301	0,779
Taxes on Income/Profits	16946510411	70207004049	0,241	0,821
Crisis	-8036023038	2,21971E+11	-0,036	0,973
Adjusted R-squared	0.880			

Table 8: Dependent Variable FDI Inflow Austria

Dependent variable $FDI_{Inflow_t}^{Ireland}$	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	-9,457E+10	1,24813E+12	-0,076	0,943
GNI	1,573	2,37	0,664	0,543
Population	104782,213	296889,403	0,353	0,742
Unemployment	-9,978E+09	17760922502	-0,562	0,604
Labor Force Participation	-1,466E+10	24118758617	-0,608	0,576
Taxes on Income/Profits	1,4123E+10	17338683396	0,815	0,461
Crisis	8,5905E+10	60154061571	1,428	0,226
Adjusted R-squared	0.805			

Table 9: Dependent Variable FDI Inflow Ireland

Dependent variable $FDI_{Inflow_t}^{Norway}$	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	-1,024E+12	1,30902E+12	-0,783	0,478
GNI	-1,123	1,457	-0,771	0,484
Population	230867,767	300102,517	0,769	0,485
Unemployment	-1,241E+10	14777448881	-0,84	0,448
Labor Force Participation	3730789098	8510157920	0,438	0,684
Taxes on Income/Profits	3541352132	3758473889	0,942	0,399
Crisis	-3,579E+10	48258480320	-0,742	0,499
Adjusted R-squared	0.787			

Table 10: Dependent Variable FDI Inflow Norway

Dependent variable $FDI_{Outflow_t}^{Austria}$	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	25701437568	5,54548E+12	0,005	0,997
GNI	-2,171	6,134	-0,354	0,741
Population	-134964,983	841204,121	-0,16	0,88
Unemployment	4925491809	81547779043	0,06	0,955
Labor Force Participation	23643820625	50177154786	0,471	0,662
Taxes on Income/Profits	6777992990	71255151029	0,095	0,929
Crisis	-5,3396E+10	2,25285E+11	-0,237	0,824
Adjusted R-squared	0.772			

Table 11: Dependent Variable FDI Outflow Austria

Dependent variable $FDI_{Outflow_t}^{Ireland}$	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	1,2705E+12	1,47711E+12	0,86	0,438
GNI	-0,834	2,805	-0,297	0,781
Population	310282,05	351355,591	0,883	0,427
Unemployment	-3,373E+10	21019273043	-1,605	0,184
Labor Force Participation	-3,503E+10	28543493323	-1,227	0,287
Taxes on Income/Profits	9903531754	20519571574	0,483	0,655
Crisis	1,1507E+11	71189694384	1,616	0,181
Adjusted R-squared	0.780			

Table 12: Dependent Variable FDI Outflow Ireland

Dependent variable $FDI_{Outflow_t}^{Norway}$	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	-1,022E+12	1,16057E+12	-0,881	0,428
GNI	-0,129	1,291	-0,1	0,925
Population	66882,693	266069,414	0,251	0,814
Unemployment	8652219901	13101613394	0,66	0,545
Labor Force Participation	8689430124	7545064097	1,152	0,314
Taxes on Income/Profits	2209633395	3332244438	0,663	0,544
Crisis	-1,525E+10	42785730961	-0,357	0,739
Adjusted R-squared	0.743			

Table 13: Dependent Variable FDI Outflow Norway

Dependent variable $FDI_{Net_t}^{Norway}$	Estimated Coefficients	Std. Error	Т	Sig.
(Constant)	-7,162E+11	2,99016E+11	-2,395	0,075
GDP	-3,806	1,152	-3,303	0,03
Population	360647,557	99009,877	3,643	0,022
Unemployment	-2,685E+09	5966673928	-0,45	0,676
Labor Force Participation	5984976139	3158847577	1,895	0,131
Taxes on Income/Profits	-3,019E+09	1386767721	-2,177	0,095
Crisis	-5,921E+10	15503752697	-3,819	0,019
Adjusted R-squared	0.802			

Table 14: Dependent Variable FDI Net Norway with GDP