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Benefits of American Tech Companies in Ireland

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I declare it to be my own work and that all material from third parties has been appropriately referenced.

I further confirm that this work has not previously been submitted for assessment by myself or someone else in CCT College Dublin or any other higher education institution.

# Abstract

This paper will examine big tech American companies, providing an overview of these organizations’ operations and importance. It will present into the motivation to establish in Ireland, showing key factors such as favourable tax policies, access to skilled workforce, and supportive business environment. This analysis further outlines the economic history, its current economic landscape and its strategic vision of growth, will illustrate how these elements have made Ireland an attractive destination for tech firms. Emphasizing the implications of business and trade. The role of human talent as a critical driver for innovation in the technology sector is analysed, along with an examination of Ireland’s climate condition, which may influence global companies’ decision to operate in this country. This study will underscore Ireland’s position as a key player in the global economy in the world.

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# Introduction

Analyse four U.S. technology companies such as Google, Meta, Amazon and Microsoft, providing a summary of each. Following this, the reasons behind these companies’ decision to establish operations in Ireland will be explained, exploring the potential motivations for this choice.

Based on this, the factor that have positioned Ireland as a preferred destination for technology companies will be described. These factors will include the economic impact that Ireland has experienced throughout its history, the country’s current situation, and its vision for development in the coming years. Additionally, the effects of Brexit on Ireland will be explained, particularly its impact on international affairs within the Europe community.

Furthermore, human talent will be analysed as a key factor for knowledge development in the technology sector. Finally, Ireland’s climate condition will be considered as a factor that may attract global tech companies to establish offices in the country.

# Objectives

The aim of this research is to understand the importance of these four U.S. companies have on Ireland, focusing on their economic influence, the present skilled personnel, international relations and select environment issues.

* General Objectives
  + Assess the significance of American technology companies
  + Examine Ireland’s appeal as a business destination
  + Identify and describe four key economic and social impact on the country
* Specific Objectives
  + Analyse economic metrics, such as investment levels and GPD contributions
  + Examine data on the educational sector’s contribution to the tech industry
  + Provide a brief overview of the country’s environmental conditions and their relevance to technology companies

# Problem Definition

Context: How these companies contribute to Ireland’s economic and social development, particularly at a time of rapid growth in the tech sector through advancements and emerging expertise in the field, with the goal of acquiring and applying this knowledge in the industry. Topics including GDP, environment factors, and the international landscape will also be essential to provide context for the final project.

Impact: Present features that impact Ireland and their effects on the technology sector. With the growing use of ICT and the ongoing development of artificial intelligence, multiple countries are striving to lead in communication, e-commerce, and cloud computing system. This drive underscores the importance of human talent, which would also have a positive impact on sustaining industry growth. Additionally, Ireland’s economic strength an international role makes it an attractive destination due to its favourable tax benefits, drawing numerous global companies to the country. Ireland also stands out as gateway to the European market following the United Kingdom’s exit.

Importance: The importance of this topic is rooted in the early stage of Ireland’s economic development in the last century and in how various sectors have evolved since then, fostering the country’s growth. Recently, there has been a growing focus on large global corporations, particularly big technology organizations along with the most prominent technology sectors.

# Scope

Below, I will present several points to consider for the project.

* Describe Ireland economy, considering some aspects from the last century and the contemporaneous Ireland’s economy.
* Why is Ireland important for tech companies?
* Delivery information about technology industry in America
* Show a brief description of Meta, Microsoft, Google and Amazon
* Present a relation between American tech companies and Ireland
* Describe four variables such as economy, talent, international affairs and environment.
* Predict the development of Ireland’s economy in the technological field over the next 5 years

## Methods & Techniques

Throughout the Project, I will consider several methodological approaches to ensure a comprehensive analysis based in technical consideration like papers, books and web investigation, data gathering and graphic representation to support the project. The methodology that its going to be use are:

1. Descriptive Method:  
   This part of methodology from my final project will focus on describing the selected American companies based on their established presence in Ireland. I will delve into their operational strategies and contributions to the local economy. Additionally, I will explore the various factors that make this country an attractive destination for entrepreneurs and investors, including its favourable business environment, regulatory framework and cultural aspects.
2. Historical Method:  
   This approach will involve providing a concise overview of the Irish economy, tracing its development from the past century to the present day. By examining key historical milestone and significant transformations, also give context about the current economic landscape. This will include discussions on shifts in wealth distribution, the availability of nature resources, and the impact of international economic relations on Ireland’s growth trajectory.
3. Analytical Method:  
   After collecting relevant data on the selected companies, the broader economy, education system, and environment, I will conduct thorough analyses to evaluate their contributions to economic and social development. This method will also address potential negative impacts associated with the operations of these companies, providing a balanced perspective base on empirical data and case studies.
4. Comparative Method:  
   Following the descriptive analysis of the companies and a general understanding of the Irish economic framework, I will gather and compare relevant data to assess the positive impacts of technology companies on the local economy. This comparative analysis will involve benchmarking key performance indicators and evaluating how the presence of these multinational corporations has influenced economic growth, job creation and innovation.

By employing these diverse methodologies, the project aims to provide a holistic view if the interplay between American technology companies and Ireland’s economic and social landscape.

## What Expect by The End of Semester Two?

The objective of this project is to present a comprehensive analysis that highlights the contributions of Google, Amazon, Meta and Microsoft in Ireland. This will be achieved through the examination of some key components that will be elaborated upon to provide a detailed understanding of their impact on the economy, education and environment. To facilitate a thorough exploration of these contributions, I will employ various data sources, enhancing my understanding of the topic and allowing for the extraction of meaningful insights. Through effective visualization, I aim to draw informed conclusions regarding the influence of these technology giants.

By systematically breaking down each component and employing rigorous analytical methods, the project aspires to deliver a nuanced perspective on how these companies are shaping the future of Ireland. This approach will not only clarify the specific roles that each company plays within the Irish context but also illustrate the broader implications of their presence in terms of economic growth, education advancement and environmental stewardship. Ultimately, the findings will provide valuable insights for policy markets, stakeholders and the public regarding the multifaceted impact of these major technology firms.

# Capstone Report Second Part

# Business Problem

## Global Business

Over the last few years, we have been experiencing significant technological challenges that are having impact on the way we work, study, and livelihoods. Covid-19 and the development of artificial intelligence were scenarios that allowed technology to play fundamental role in the growth of the sector. In this way, new ways of doing things in our daily lives emerged, so that as the months went by, we adapted to new technologies

## International Relations

Most of the tech companies come from the United States, such as Apple, Amazon, Microsoft, and Meta. The relationship between these two countries is important, according to Ireland.ie (2024) “The relationship dates to the 18th century, where there was Irish participation in the declaration of independence of the United States. Also is important to take in consideration that the Irish ancestor that America has had over the years”. In addition, it is important to mention that Ireland, an English-speaking country, is the strategic gateway to the European Union due to the good relations it has with the country. This undoubtedly means an advantage for Ireland, but if we complement the departure of the United Kingdom in 2020, this leaves Ireland in a very good position because the new regulations between the United Kingdom and the European Union become a longer commercial process, while, as Ireland is part of the European Union, these processes are less bureaucratic, benefiting trade, job offers, and tourism.

# Project Plan

# Business Understanding

## Economy

Ireland was a poor country 100 years ago, facing great famines, wars and migrations to the United States and nearby European countries, all this since the 19th century. However, since the mid-20th century, Irish economic growth strategies changed when they decided to focus on opening their borders to companies with a low tax rate, evidently many multinationals began to focus on the country. Taking into account the companies mentioned before, there are some things that have helped Ireland’s development through job opportunities, investments, and knowledge. Apple was the first company to arrive in Ireland (1980), five years later Microsoft arrived, and during the 2000’s Google and Meta made their appearance in the technological market in Ireland. Also is important to mention that (2024) the Irish government is looking to increase the corporate tax rate to 15% for some large companies, but the appeal remains.

According with the European Commission (2024) “Ireland’s GDP is expected to decline by 0.5% in 2024, mainly due to a contraction in the multinational sector in the first half of the year. Economic activity is projected to rebound with growth of 4.0% in 2025 and 3.6% in 2026 supported by0020a strong labour market, low headline inflation and favourable external environment. Headline inflation is set to remain low over the forecast horizon. Public finances are forecast to normalise after further positive surprises in revenues and strong increases in expenditure. “

From: <https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/ireland/economic-forecast-ireland_en>

## Employment

A slight decline is expected for the coming year, however, both domestic and international students may vary the job offers. If we talk about companies in the technology sector. According to Nathantrust (2022) nine of the top ten global and American companies are in Ireland. In addition, there are more than 900 USA companies in Ireland Nathantrust 2022. All these contexts about technology companies in Ireland attract the attention of young Europeans since, being part of the European Union, they have not problems to access to this tech market. If your want to take advantage of the job offers in this industry, you must train people to be at the forefront, according to NT (2022) computer science and coding are now part of both school and university subjects.

According with central statistics office (2024) “Ireland had a rate of 95% of 20–24-year-olds with at least higher secondary level of education, ranking the country joint second with Greece and behind Croatia among EU member states… The Irish rate for early school leavers of 18–24-year-olds in 2023 was 4%... In 2023 Ireland was well above the EU-27 average for third level attainment across all age groupings.

From: <https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/ireland/economic-forecast-ireland_en>

Environment

To store large amounts of data, computers are used in a cold system so that the equipment does not overheat, which means that the energy consumption to keep the equipment running. This is another reason why technology companies are in Ireland, thanks to Ireland’s climate conditions, a country that is cold all year round, despite the seasons, and thus manages to reduce operating costs.

According with KPMG (2024) “Ireland is a popular location for tech startups and giants alike, owing to its well-understood matrix of favourable characteristics: political stability; absence of natural risks; EU membership; English language; position between North America and Europe; ambient climate; developed supply chain; talent depth.”

# Data understanding

## Initial Data

After looking in some page and going deep into each page to find a data base that could accomplish my goals and at the same time trying to stablish a logical connection with this project. I have found a database that explain both capital acquisitions and capital sales in different industries

A screenshot of a report

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## Data Describe

There are just 5 features and 1720 observations. The first feature explains if into the industry there was and acquisition or a sale. Next, we have years from 2014 to some data 2024, and the feature quarter, which is basically the division during the years. Finally, the value that the sector has generated (Euros) since 2014.

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## Explore Data

Here there are some visualizations from the data founded. During this year 2024 the government has been acquiring and selling, with chemicals and computer, and electronic the most valuable. (Excluding “industries”).

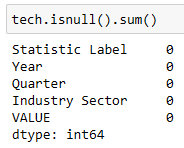
A graph with blue squares

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From: <https://data.europa.eu/data/datasets/05f5626f-7542-4bb4-acbe-40f66200cb2b>

## Verify Data Quality

In this part we can see some missing values and the final dataset that will be used to apply machine learning model next semester.



However, there are some values as “0”, representing that are not part of the million euros represented in the data gathered.

# Data Preparation

## Select Data

Basically, these are the features and observations that I am going to use.

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## Clean Data

Handling Missing Values, Text Data Cleaning, Standardisation and Handling Inconsistent Data. In this case I have modified the observation, for a better understanding.



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## Construct Data

Changes or new from in some of the data from the data. This new data will allow me to use some machine learning methods. This is for the change I have made from qualitative variables to numerical (1 & 0)



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After this process is completed, my data set is ready to be modelling through different model both supervised and unsupervised machine learning model. Nevertheless, evaluation it is a crucial step after modelling the data that was founded, and finally be deploy.

# Reference

* CCT-Dublin. (2024). *Capstone project - JeissonSPreciado*. Disponible en: <https://github.com/CCT-Dublin/capstone-project-JeissonSPreciado.git>
* CurrencyFair. (2022). *How Ireland became a tech hub (and what’s next)*. CurrencyFair Business Blog. Disponible en: <https://blog.currencyfair.com/en/business/how-ireland-became-tech-hub>
* European Business Review. (2023). *How Ireland is becoming an international tech hub*. European Business Review. Available at: <https://www.europeanbusinessreview.com/how-ireland-is-becoming-an-international-tech-hub/>
* Sinha, S. (2024). *US Big Tech companies’ complicated role in Ireland’s booming economy*. Observer. Available at: <https://observer.com/2024/07/us-big-tech-companiess-complicated-role-in-irelands-booming-economy/>
* OECD. (2024). *Trade in value added*. OECD. Available at: <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html>
* World Bank. (2024). *GDP growth (annual %)*. Available at: <https://datos.bancomundial.org/indicador/NY.GDP.MKTP.KD.ZG?end=2023&locations=EU-IE-ES-DE-AT-FR&name_desc=false&start=1980&view=chart>
* Sinha, S. (2024). *US Big Tech companies’ complicated role in Ireland’s booming economy*. Observer. Available at: <https://observer.com/2024/07/us-big-tech-companiess-complicated-role-in-irelands-booming-economy/>
* The Economist (2023) How technology is redrawing the boundaries of the firm. Available at: <https://www.economist.com/business/2023/01/08/how-technology-is-redrawing-the-boundaries-of-the-firm>
* Government of Ireland (n.d.) Ireland's relationship with the USA. Available at: <https://www.ireland.ie/en/usa/irelands-relationship-usa/>
* CurrencyFair (n.d.) How Ireland became a tech hub. Available at: <https://blog.currencyfair.com/en/business/how-ireland-became-tech-hub>
* The European Business Review (n.d.) How Ireland is becoming an international tech hub. Available at: <https://www.europeanbusinessreview.com/how-ireland-is-becoming-an-international-tech-hub/>
* Observer (2024) US Big Tech companies’ complicated role in Ireland’s booming economy. Available at: <https://observer.com/2024/07/us-big-tech-companiess-complicated-role-in-irelands-booming-economy/>
* European Commission (2024) Economic forecast for Ireland. Available at: <https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/ireland/economic-forecast-ireland_en>
* Central Statistics Office (2024) Ireland, the EU and educational attainment. Available at: <https://www.cso.ie/en/releasesandpublications/ep/p-eda/educationalattainmentthematicreport2024/irelandtheeuandeducationalattainment/>
* Nathan Trust (n.d.) Ireland is the number 1 destination for US tech firms. Available at: <https://www.nathantrust.com/insights/ireland-is-the-number-1-destination-for-us-tech-firms>
* KPMG (2024) Data centres in Ireland strategy. Available at: <https://kpmg.com/ie/en/home/insights/2024/11/data-centres-in-ireland-strategy.html>
* BBC Mundo (n.d.) [Spanish article on Ireland’s tech industry]. Available at: <https://www.bbc.com/mundo/articles/clj96g87g4wo>
* Foreign Policy (2023) Ireland’s economy, taxes, and the role of US tech companies in the EU. Available at: <https://foreignpolicy.com/2023/04/27/ireland-economy-taxes-jobs-apple-us-tech-companies-eu/>
* The Economist (n.d.) [General Economist page]. Available at: <https://www.economist.com>
* European Union (n.d.) [Dataset on Ireland’s economy]. Available at: <https://data.europa.eu/data/datasets/05f5626f-7542-4bb4-acbe-40f66200cb2b>
* Central Statistics Office (n.d.) [Data on Ireland]. Available at: <https://data.cso.ie>
* World Bank (n.d.) Ireland’s GDP dataset. Available at: <https://datacatalog.worldbank.org/search?fq=(geographical_extent%2Fcoverage%2Fany(geo:geo%2Fname%20eq%20%27Ireland%27))&q=ireland%27s%20gdp&start=31>