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Presentation Title: Brexit: An Econometric Analysis

Research focus: Building an Econometric model to capture the potential impact of leaving the EU on Britain's GDP.

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Abstract:

Brexit: An Econometric Analysis
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Over the last decade or so, the environment of both politics and economics has come to a period of transition that is filled with uncertainty. Today, we find ourselves in a G-Zero¹ climate, where no specific country nor economic bloc truly leads or leverages itself as a global leader. The overall increased globalization has certainly contributed to this state of affairs². Now, we see political movements in certain countries that previously led the world, emerging and growing, viewing their demise in international prowess as an opportunity to take their country back, in hopes, that it will allow them to secure a safer future. Most notably, the United Kingdom (UK) has found itself at the forefront of this issue and now faces the difficult decision of either leaving or staying as a member of the European Union (EU). However, this reaction to decades of entrenched economic policies and institutions makes way for a very uncertain future. Using econometric modeling, I estimate the effect of EU membership for several European countries, focusing specifically on the United Kingdom and characterize how Brexit may impact the United Kingdom's economy.

¹ G-Zero is defined by political scientists Ian Bremmer and David F. Gordon, as a state of international politics where no single country is a definite leader or able to drive a global agenda

² Us Vs. Them: The Failure of Globalism - Book by Ian Bremmer

From a preliminary point of view, we know from neoclassical economic theory³ that GDP can be gauged using the Aggregate Demand (AD) and Aggregate Supply (AS) model - if either AD or AS shift outward, we expect GDP to increase. If either AD or AS shift inward, we expect GDP to decrease. Using an AD/AS graph, we would expect Brexit to cause inward shifts on both AD and AS. For example, Aggregate Supply would be impacted significantly as access to markets and movement of free labor decline. This would cause consumption, investment spending and possibly net exports to fall. In response, we expect the AD curve to shift inward as well. The inward shift of both these curves may even cause stagflation as both GDP decreases and price levels increase. Consequently, in a post-Brexit world, transportation costs, labor wages and many other factors should increase as barriers of trade are re-established and economic drivers such as the supply of labor decline.

My econometric⁴ analysis explores the theoretical impact of Brexit on Britain's GDP by utilizing macroeconomic data from the World Bank from 1960 to 2017. By designing models that account for various factors of GDP growth and additionally taking exogenous factors⁵ into account, I will compare GDP growth within and between the United Kingdom and the following European Countries: Ireland, Spain, Austria, Germany, Sweden, Denmark, and Finland. The United Kingdom joined the European Union (EU) in 1973 while the rest of the listed European Countries entered the EU at different time periods. Results will be discussed in terms of the implications of Brexit both theoretically and statistically and the role it will play in our near future as an example of how significant economic policy can be.

³ Diagram representing the intersection of supply and demand is a central element of neoclassical economics

⁴ Application of statistical methods to economic data

⁵ Population Growth, Birth Rates, Death Rates, Oil Price, Oil Production and Adolescent Fertility Rates