

United Kingdom Inequality Report

Eric Kuznar
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Executive Summary

Data

Three datasets on wealth and status distribution in United Kingdom were analyzed: 2015 World Bank quintile and decile estimates of income, and International Labor Organization (ILO) income by occupation data for years 2017 and 2011.

Results

Income data from the World Bank and occupational data from ILO indicate that the United Kingdom is highly risk acceptant. Despite this similarity, the relationship between wealth attainment and risk acceptance between the two sources is different. The World Bank data indicates a country in which the individuals who make the highest incomes are the least risk averse. While the data from ILO shows a positive relationship between the average income for an occupation and an increase in risk aversion.

Significance for Risk Taking and Stability

The United Kingdom's propensity for risk taking can be currently observed through the UK's referendum to leave the European Union, which is planned to take place later in 2019 (BBC, 2019). However, the impact Brexit will have on stability and the UK and its institutions is still unknown as it has been delayed repeatedly.

Implications for US Interests

The United States has an important relationship with the United Kingdom as it has been a long time ideological and political ally against autocratic states including Russia. The US also holds the UK as a strategically important player due to its current position in the EU (Belin, 2019). The United Kingdom has been a US ally in its activities outside of Europe against Chinese encroachment into the South China Sea. Despite this, economic changes from the UK leaving the EU will occur within the next year, challenging the US-UK relationship. The scope and impact of these changes has yet to be understood. The economic changes that will occur have far reaching implications because of the large trade between the US and UK (United States Trade Representatives, 2019). Much more important than their trade relationship is their political partnership, both strategically with respect to security/coalition issues and with respect to soft power (Belin, 2019). The UK's risk acceptant population is a risk to the US interests because this population has chosen disruptive political and economic changes that may destabilize the country.

Implications for China's Interests

China sees a post-EU United Kingdom as a potential economic partner. The UK's planned exit from the EU has led to Chinese economic overtures, suggesting a potential free-trade deal and the connection of China's Belt and Road Initiative (BRI) to London (Johnson, 2019). China and the UK have little political differences with one other than the UK's joint military operations with the US (Kelly, 2019). Despite the UK's close ties to the US, its risk acceptant population gives China an opportunity to increase its standings politically and economically as it looks to extend its BRI to London (Johnson, 2019).

Implications for Russia's Interests

Russia has little direct influence within the United Kingdom. Other than their historic ties as two of the five permanent members of the United Nations Security Council, the two countries are fundamentally at odds with each other on an ideological level (House of Commons, 2017). While the upcoming Brexit may offer the opportunity to soften Russian-UK relations, it is unlikely to cause wide ranging or deep changes. Despite the unlikelihood of changes in Russia and the UK's relationship the UK's risk acceptant population provides Russia an opportunity, as Brexit will weaken the UK's connection to the EU.

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Introduction

This is a summary report on inequality in United Kingdom compiled as part of the Aggrieved Populations project conducted in support of the 2019 Strategic Multilayer Assessment (SMA) Future of Great Power Competition and Conflict project conducted for the JS-J39.

This report provides background on why the country was chosen, relevant historical background, literature review concerning inequality in the country, synopses of empirical data sources and analyses, and a concluding section that summarizes the findings. It is not intended to provide a comprehensive analysis of inequality and grievance in the country, but to place the empirical analyses conducted on this country in their social and political context and to highlight interesting cases of inequality pertinent to risk acceptance and great power competition. The analyses focus on the measurement of population risk sensitivity as a function of measured inequality using the Arrow-Pratt measure of risk aversion, whose positive values indicate risk aversion and negative values indicate risk acceptance. Studies have shown that risk acceptance is associated with social unrest, terrorism, and other forms of social disruption (Kuznar 2007; 2019). The full explanation of the underlying method and theory is presented in the summary report, *Inequality, Risk Sensitivity and Grievance in Context: Summary of Aggrieved Populations Country Reports*, submitted as part of this SMA project. This report is intended to be supporting material to that report and presumes familiarity with it.

In order to create an inclusive and more representative set of countries, an effort was made to analyze countries from each major region of the world (Africa, Central Asia, East Asia, Europe, Latin America, the Middle East, North America, South Asia).

Why United Kingdom?

United Kingdom was chosen for two reasons: 1) It is a key ally of the US, and 2) it is undergoing political turmoil regarding its exit from the European Union.

Great Power Interests in United Kingdom

The United States views the United Kingdom as a close political and ideological ally. The UK plays an important role in US international political affairs as a supporting partner against China and Russia. The United Kingdom's planned exit (Brexit) from the European Union (EU) has altered the US' relationship with its trans-Atlantic partner (Oliver, 2016). Brexit has been pushed back several times and is supposed to occur later in 2019 if the UK can come to terms with the EU on the manner of its departure (BBC, 2019). While this does not necessarily harm the US's shared interests with the UK, it does cause an inevitable stage of transition within the UK's economic institutions as it exists the EU financial system (Oliver, 2016). It is still uncertain how the UK's departure from the EU will influence its economy. Currently the UK is the US' seventh largest trade partner, with bilateral trade between the two countries adding up to more than \$260 billion USD.¹

More important than their financial connection is the political relationship of the US/UK. The US has worked with the UK and other EU states to prevent Russia from overstepping its boundaries into Eastern Europe (Belin, 2019). Belin states that, through the EU, the UK has played an important role in aiding the

¹ UK international trade relations: <https://ustr.gov/countries-regions/europe-middle-east/europe/united-kingdom>

integration of European countries, an effort that has been placed on par with NATO's role in European stability by past US president George W. Bush. The US-UK relationship also reaches outside of Europe to the containment of Russia in the Pacific and the resistance of Chinese aggression. In early 2019, the UK and US conducted their first joint naval exercise in the South China Sea; an action that was directed at China and its goal to continue to build naval bases in contested waters (Kelly, 2019). The UK's importance as an ally to the United States against Russia and China cannot be understated in both its geopolitical value and physical application.

As large European powers, the UK and Russia have an important relationship that has economic and political implications for all of Europe. However, since the end of the Cold War their bilateral relationship is at its most strained (House of Commons, 2017). Since Russia's annexation of Crimea in 2014, the UK has been decreasing its political relationship with Russia by suspending dialogue and cancelling visits by prominent UK politicians to Russia. The UK, along with other EU countries, have confronted Russia on its use of propaganda and dissemination of fake news through Russian Television (RT), biased Russian think tanks, and other forms of Russian media as propaganda (House of Commons, 2017).

Even though Russia-UK political relations are fraying, the relationship still holds important economic and political implications for the majority of Europe. Russia and the UK are two of five states that hold permanent seats on the United Nations Security Council that would convene in the event of a complete breakdown of European security (Iliina, 2018). As part of the EU, the UK is a member of an organization that accounts for more than half of all Russian trade. This is true until it leaves the EU via Brexit (Parliament UK, 2015). However, the UK itself only accounts for less than five percent of Russia's imports and exports giving Russia few economic interests in the UK alone.

Unlike Russia (with whom the UK's relationship is fraying) and the US (which is registering concern over Brexit), China and the UK are growing closer due to shared economic interests and the potential economic growth that the BRI could bring to the UK upon its exit from the EU (Johnson, 2019). While the UK is still one of the US's strongest political allies and has conducted joint naval operations within the South Asia Sea as a deterrent to China (Kelly, 2019), the UK's departure from the EU—as well as the potential for economic growth generated from the BRI has caused leaders in London to be receptive of China's proposed economic initiative (Johnson, 2019).

Literature Review on Inequality in United Kingdom

Inequality in the United Kingdom has been relatively stable since the 1930s. The case can be made that parts of the UK's wealth attainment and income are becoming more equal throughout the country, despite the overall gain by families and top earners (Bell, 2018). Income inequality itself has also decreased since the mid-2000s (The Equality Trust, 2017). Past wars and policy changes are credited with the leveling out of income inequality, and despite a minor increase wealth inequality since 2008, the UK is still much more equal today than it was pre-1940s (Bell, 2018).

Racial minorities within the UK are the most likely to experience inequality in their daily living standards and work-related opportunities (Equality and human Rights Commission, 2016). More than 80% of hate crimes committed in the UK are committed with racial motivations. Racial minorities in the UK are less likely to secure employment, achieve highly in education, and receive quality health care. British Prime Minister, Theresa May, commented in 2017 that institutional racism within the UK needs to be addressed

(BBC, 2017). The racial minorities that suffer from highest amount of inequality are Pakistani, Bangladeshi, and blacks (Equality and human Rights Commission, 2016).

Country-Level Measures of Inequality in United Kingdom

The United Kingdom was initially assessed with a collection of country-level metrics. These metrics provide measures of the country's inequality compared to other nations, inequality within the country, social conditions that may be consequences of that inequality, and the prognosis for stability in the future (**Error! Reference source not found.**).

The United Kingdom is a wealthy country with a per capita GDP in 2018 amounting to \$39,800. It has relatively low inequality when compared to other countries in the study with a small informal economy and a high inequality adjusted human development index. It is also a very stable nation, ranking near the top 10% of stable countries as measured by the Fragile States Index. The UK does, however, suffer a disproportionate amount of terrorist attacks when compared to other EU countries as it suffered 122 attacks in 2017 (Roser, 2018). This is the highest number in Europe. However, it still has a small probability of mass killings when compared to other countries using EWP data.

Table 1. United Kingdom: Basic Statistics on Inequality

Measure	Value	Rank	Source
Inequality Compared to Other Nations			
Per Capita GDP 2018	\$39,800	23 of 187	WB
Country Measures of Inequality			
Inequality-adjusted Human Development Index (IHDI) 2018	0.835	17 of 151	UN
Gini Coefficient	45.0%	44 of 184	WB
Informal Employment as % of Total Employment	13.6%	90 of 112	ILO
Measures of State Instability			
Fragile States Index	34.3	156 of 175	FFP
Terrorism Index	5.610	28 of 160	IEP
Probability of Mass Killing	0.002	128 of 161	EWP
Risk Sensitivity			
Average Arrow-Pratt Measure	-4.02	122 of 158	This Study
<p>*EWP – Early Warning Project, FFP – Fund for Peace, IEP – Institute for Economics and Peace, ILO – International Labor Organization, UN – United Nations, WB – World Bank</p> <p>-The Inequality-adjusted Human Development Index (IHDI) is a UN measure of well-being and is a scale based on per capita GDP, life expectancy and education levels of the population.</p> <p>- The Fragile States Index is based on twelve conflict risk that include security apparatus, factionalized elites, group grievance, economy, economic inequality, human flight and brain drain, public services, state legitimacy, human rights and rule of law, demographic pressure, refugees and IDPs, and external interventions. The potential range of the index is zero (no fragility to 120 total fragility).</p> <p>- The Terrorism Index scores each country on a scale from 0 to 10; where 0 represents no impact from terrorism and 10 represents the highest measurable impact of terrorism.</p>			

Prognosis for Change to 2029

The influence that Brexit will have on the UK's population (as it relates to risk taking) is still unclear as it has not come to pass. Investors from inside, and outside, of the country are wary of investing in UK businesses until Brexit is finalized due to changes that will need to occur within the UK's banking system (Gilbert, 2019). Since Brexit has been delayed multiple times due to the complex nature of the UK's current deals involving the EU, there are still many questions about how the UK will leave and what comes after (BBC, 2019).

As represented in the ILO data contained within this report, the change occurring within the United Kingdom is a slight shift toward risk acceptance with the Arrow-Pratt score falling by 0.1 over a six-year period. Due to slightly widening inequality and a looming Brexit from the EU, the UK's acceptance of risk is likely to remain high (Bell, 2018)

Empirical Data on Inequality in United Kingdom

Dataset 1: 2016 United Kingdom World Bank Quintile Data

The first dataset was taken from the World Bank, which measures the highest and lowest incomes from careers within the country. This data was used to measure the Gini coefficient and then placed into the model. The data taken from the World Bank focuses on income and not occupation.

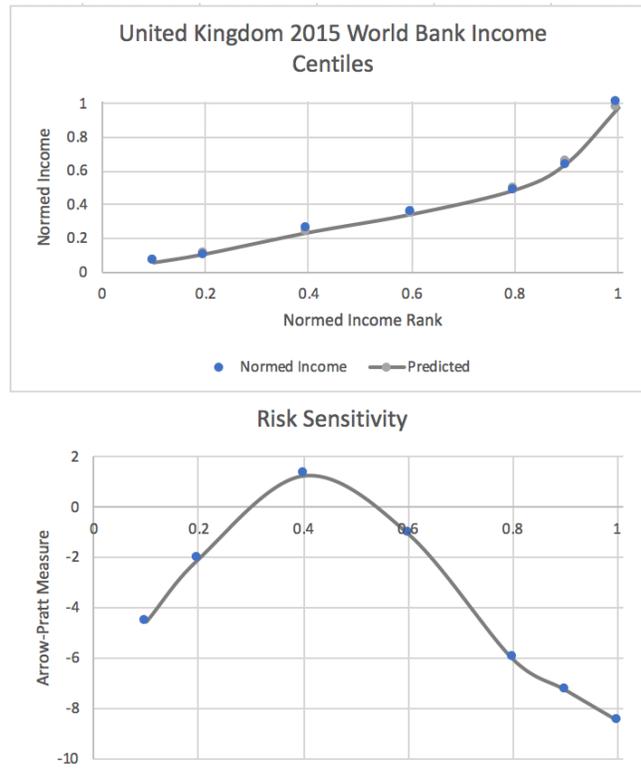


Figure 1: Distribution of Income, World Bank Quintiles United Kingdom 2015 and associated Risk Sensitivity.

Summary Dataset 1: 2016 United Kingdom World Bank Quintile Data.

The World Bank quintiles of income data show a high acceptance of risk throughout most of the United Kingdom's income earning population. The mean Arrow-Pratt measurement for the data taken from the World Bank is -4.02. Between the 3rd and 6th centile is the only section of data based on people's income that registers as risk averse, or unwilling to take risk. Both the lowest centiles and the highest are risk acceptant. The eight and tenth centiles represent the highest income earners within the United Kingdom who are also the most risk acceptant with a low Arrow-Pratt score of less than -8. This shows an extreme propensity for risk taking behavior by those who earn the most. This is most likely due to the benefits of maintaining their socioeconomic standing (Imas, 2014).

Dataset 2: ILO United Kingdom 2017 Income by Occupation

Data taken from ILO is used in the second and third datasets. This provides a look at potential changes through time, first accounting for the most recent and relevant data from 2017. The ILO data shows how many people are employed in an occupation and what its average income is. The data is broken down further for some occupations, listing subgroups and their average wage.

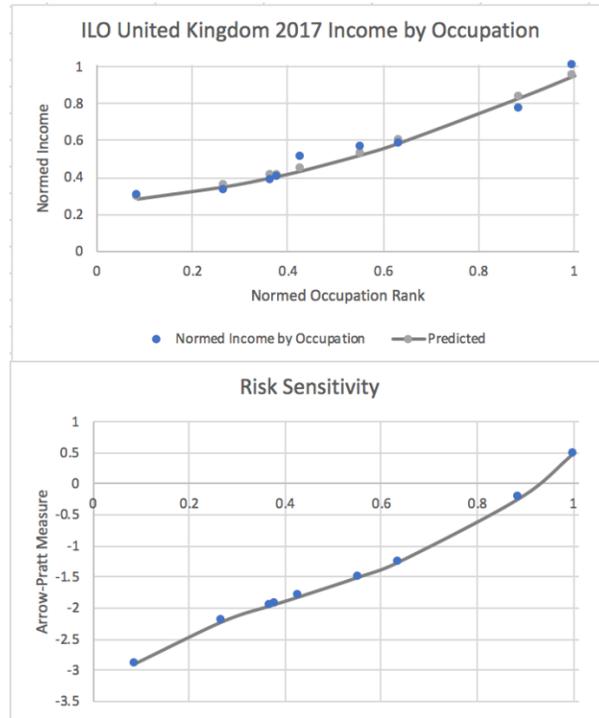


Figure 2. ILO United Kingdom 2017 Income by Occupation and associated Risk Sensitivity

Summary Dataset 2: ILO United Kingdom 2017 Income by Occupation

The mean Arrow-Pratt score for the 2017 ILO data is -1.49. This shows a country made up of risk acceptant occupations. The occupations that earn the smallest average income are the most risk acceptant. The connection between occupational income and risk sensitivity in the ILO data demonstrates a unique pattern compared to other countries in the Aggrieved Populations study. There is a positive linear relationship between the increase in income and decreasing risk acceptance; in the case of the UK, the wealthy trend toward risk aversion.

Dataset 3: ILO United Kingdom 2011 Income by Occupation

The ILO data that shows the income from occupations in 2011 represents very similar results to the more recent 2017 data. The data is constructed in the same way under the same headings and subheadings for occupations, including how many people are employed in each occupation and the average earnings achieved by those occupations.

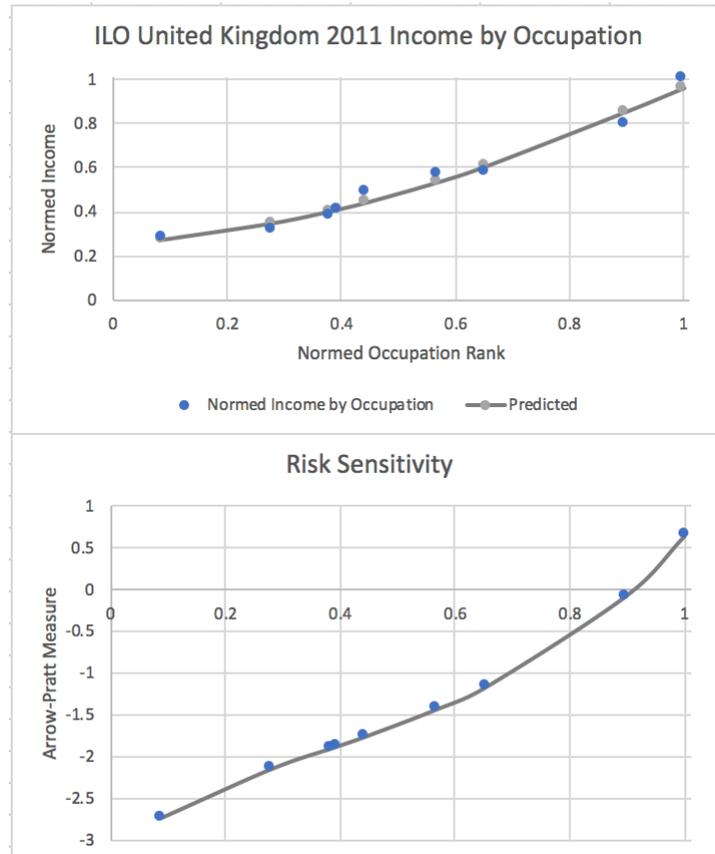


Figure 3. ILO United Kingdom 2011 Income by Occupation and associated Risk Sensitivity

Summary Dataset 3: ILO United Kingdom 2011 Income by Occupation

The mean Arrow-Pratt score for the ILO data from 2011 is -1.39, this is a decrease in risk acceptance from the 2017 data set. Like the 2017 data, these data show that the lowest income earners are the most risk acceptant with an Arrow-Pratt score of less than -2.5, while the highest earners whom are comprised of mostly managers and financial advisors are the least risk acceptant with a score higher than 0.5. Like the 2017 dataset, the income a person receives has a decreasing linear relationship with his or her risk acceptance. The highest earners being those in managerial positions and in the financial sector, while the lowest earners work in manual labor and elementary jobs such as agriculture. However, this data set has a higher Arrow-Pratt score than in 2017 with an increase of 0.1 in risk acceptance over six years. This increase reflects the massive gamble the majority of British voters took in voting for Brexit (Flemming & Young, 2016).

Findings on Inequality in United Kingdom

Compared to other countries, the United Kingdom has low levels of inequality both with respect to income and between racial and ethnic groups. However, the UK does still possess a large income gap between its top earners and the rest of UK society (The Equality Trust, 2019). In 2017, the top 20% of UK earning households earned more than five times the amount as the lowest 20 percent earning households. The top 20% of UK earners also control 40% of all the wealth within the country. By comparison, the UK's income gap is less than the US where the top 20% control 79% of the wealth (Stone, 2018).

The racial and ethnic biases that the UK face are comparable to those in the United States and mainland Europe (The Princes Responsible Business Network, 2012). However due to recent terror attacks, British-Muslims have felt more discrimination as racial tensions have risen slightly (Ipsos Mori, 2018).

Relevance to Instability and Social Cleavages

While the United Kingdom faces comparable levels of discrimination and inequality to the United States and mainland Europe (The Princes Responsible Business Network, 2012), there is a new unique fissure emerging within the UK between Pro-Brexit, and Pro-European Union advocates (Duffy, 2019). This divide, while unlikely to result in outbursts of violence or major political violence, could have ripple effects throughout Europe. The UK's multi-dimensional political space has more political parties than the United States, however it can still be measured on a conservative to liberal ideological spectrum (SurrIDGE, 2019). This split is shown to have marked differences in opinions on Brexit. Most conservative UK citizens are highly EU-skeptic and favor a complete split with the EU, while more liberal citizens want to stay. Conservatives who are predicted to be risk acceptant would be a source of Brexit support, since it represents a gamble with an uncertain outcome.

Opportunities and Pitfalls for the US and Adversaries

The United States can potentially increase its involvement with the United Kingdom around the world by focusing on shared interests. The US and UK have both interacted in numerous military exercises, and recently partaken in the first ever joint US-UK naval exercise within the South China Sea (Kelly, 2019). This action is meant as a direct form of deterrence to China's for its encroachment past its sovereign borders. The US and UK, which also share large bilateral trade (ustr.gov), have been integral partners along with the European Union in the hemming in of Russia as it seeks to expand its influence into former Soviet States (Belin, 2019).

While the US has much to gain from seeing these relations continue, Washington is also facing some uncertainty over the UK's Brexit from the European Union. Even with the UK's exit from the EU, the alliance between the US and UK will remain strong due to economic and security interests that they both share (Eizenstat, 2016). While the outcome of Brexit is not clear some decision makers in Washington, including President Donald Trump, voiced support for Brexit as they believe it will allow the US to grow its economic ties with the UK via free-trade agreements. Since the impact of Brexit is uncertain, it is difficult to relate risk acceptance in the population to US interests.

China

China sees major potential political benefits through furthering relations with the United Kingdom. China sees a post-Brexit UK as one with which it can not only pursue potential free-trade deals, but also connect its Belt-Road-Initiative (Johnson, 2019). The potential for economic growth is China's greatest opportunity within the UK. Johnson goes on to state that a potential bonus of the UK's leaving the European Union

would be the weakening of the EU, with which it shares a semi-confrontational relationship. While the UK's departure from the EU will have an effect on EU political ties and functioning, it is unclear how drastic those changes will be (Eizenstat, 2016).

Russia

Russian ties with the UK are the weakest they have been since the cold war (House of Commons, 2017). Their weak economic ties, combined with ideologically opposed political views leaves Russia with few opportunities for furthering its ties with the UK This may change slightly as the UK exits the EU allowing for a reassessment of Russian-UK relations, but an extreme reshaping of Russian-UK relations is unlikely.

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