

UC Riverside

Cliodynamics

Title

Modeling Social Pressures Toward Political Instability in the United Kingdom after 1960: A Demographic Structural Analysis

Permalink

<https://escholarship.org/uc/item/72g2v469>

Journal

Cliodynamics, 8(2)

Authors

Ortmans, Oscar
Mazzeo, Elisabetta
Meshcherina, Kira
[et al.](#)

Publication Date

2017

DOI

10.21237/C7clio8237313

Copyright Information

Copyright 2017 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Modeling Social Pressures Toward Political Instability in the United Kingdom after 1960: A Demographic Structural Analysis

Oscar Ortmans¹, Elisabetta Mazzeo^{1,2}, Kira Meshcherina¹, Andrey Korotayev^{1,3}

¹ *National Research University Higher School of Economics*

² *HSE-Skolkovo Institute for Law and Development*

³ *Institute of Oriental Studies, Russian Academy of Sciences*

Abstract

In the current paper, we investigate the predictive ability of Goldstone's demographic structural model. In particular we seek to apply Turchin's version of it to modeling the social pressures for political instability in the UK. It is then demonstrated that Turchin's analysis of 'demographic structural' pressures in the US presents similar conditions that developed under neoliberalism during the same time periods in both countries. It is also demonstrated that the modeling of social pressures toward political instability in the UK and the USA performed by Peter Turchin and us can throw some light on the factors and patterns of the *global* sociopolitical destabilization wave of the 2010s. Thus, Goldstone's demographic structural model might have some predictive potential not only at the national level, but also global scale.

Introduction

Kuran's review of *Revolution and Rebellion in the Early Modern World* (Goldstone 1991) praised Goldstone's ability to accommodate historical record 'far more satisfactorily' than alternative theories. Yet, just as promptly, the review argues that "if the book has any weaknesses, it is that it blurs the distinction between explanation and prediction" (Kuran 1992: 9). For Kuran, Goldstone's 'structural demographic theory' amounted largely to consilience, where "after an event's occurrence information consistent with that event gains silence at the expense of inconsistent information" (Kuran 1992: 8). At the time, in the face of a relatively

Corresponding author's e-mail: oscarortmans@gmail.com

Citation: Ortmans, Oscar, Elisabetta Mazzeo, Kira Meshcherina, and Andrey Korotayev. Modeling Social Pressures Toward Political Instability in the United Kingdom after 1960: A Demographic Structural Analysis. 2017. *Cliodynamics* 8: 113–158.

stable western political scene, it did indeed seem that Goldstone's 'basic' demographic/structural theory was merely a tool to 'reconcile exceptional cases' and was bound to 'fail as a predictive tool' (Kuran 1992).

Today however, a quarter of a century later, the explanatory power of structural demographic theory is still well and truly alive. Turchin's (2013 and 2016) advancement on Goldstone's theory and its application to America have proven to be a remarkable framework in explaining the "longer-term social pressures that lead to revolutions, civil wars and outbreaks of political instability" (Turchin 2016: 240). Notably, Turchin's framework has been applied successfully to modern day instances of political unrest. Korotayev et al. (2013) have been able to accurately model and explain the pressures leading to the Arab Spring events of 2011. Whether one could still confidently argue that 'structural demographic' academia merely amounts to 'consilience' remains questionable.

Only recently has the predictive ability of Goldstone's model become most evident. Turchin's analysis of twentieth century America remarkably ends by cautioning us that during the decade of 2011-20 "the structural conditions will continue favoring an increase in the social pressures towards instability" (Turchin 2013: 227).

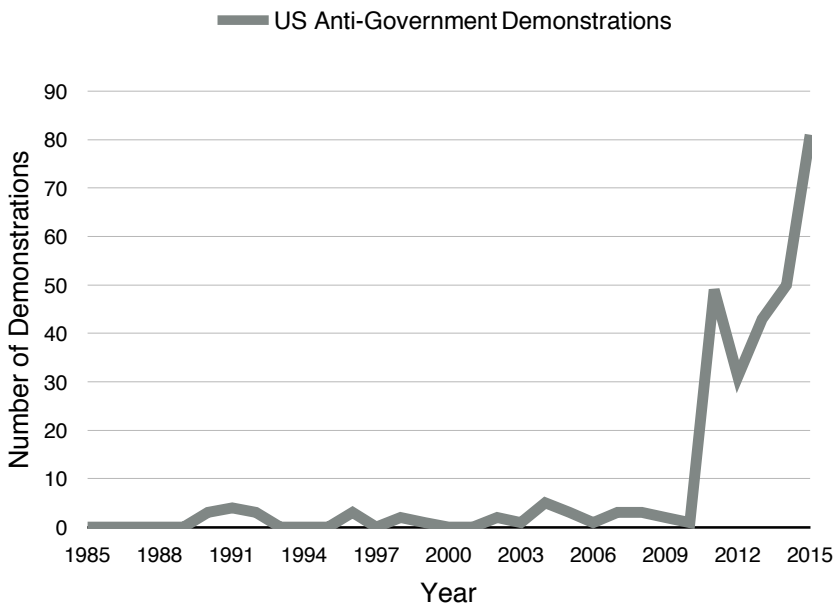


Figure 1. Number of Anti-government Demonstrations in the United States. Source: Cross National Time Series (CNTS) Data (Banks and Wilson 2017).

With the benefit of hindsight, there has never been a more important moment in history to resurface the debate on the predictive ability of Goldstone’s model. If by instability we mean “uncertainty caused by the possibility of a sudden change in the present situation” (Cambridge Dictionary 2017), Turchin’s prediction of increasing US political instability has well and truly materialized.

The growing importance of politically-motivated protest movements such as Occupy Wall Street and the more recent notable increases in rioting (in e.g. Ferguson and Baltimore) all serve as evidence of the ever increasing predictive ability in the Goldstone—Turchin theory of mass mobilization. Most impressively though, Turchin’s forecast for increasing elite instability in 20th Century America has culminated with the election of Donald Trump as 46th president of the United States of America. Who would have foreseen such a scenario in 2015, let alone 2011?

General Theoretical Approach

Our paper seeks to apply the Goldstone—Turchin theory to the United Kingdom in recent decades. By using Turchin’s framework, this paper undertakes the quantification of a ‘Political Stress Indicator’ (PSI) for the United Kingdom and discusses its practical application to modern day Britain. With a particular focus on ‘Part 4: The Current Secular Cycle’ in *Ages of Discord: A Structural-Demographic Analysis of American History* (Turchin 2016), we seek to replicate as closely as possible the metrics used for the calculation of America’s modern-day PSI in order to apply them to the same period in the United Kingdom (1960-2015).

Where possible, and relevant, we have used the same metrics as Turchin (2013 and 2016) for the quantification and explanation of the various components and their proxies. The metrics used and their quantification methods are discussed in the following sections.

Political Stress Indicator

We utilize Turchin’s framework for the Political Stress Indicator (PSI = Ψ) (Turchin 2013: 246):

$$\Psi = \text{MMP} \times \text{EMP} \times \text{SFD} \quad (1)$$

where MMP = Mass Mobilization Potential, EMP = Elite Mobilization Potential, and SFD = State Fiscal Distress.

PSI reflects the “tripartite of representation in social systems” (Turchin 2016: 25) by integrating the metrics of pressure toward instability arising from: Mass Mobilization Potential, Elite Mobilization Potential, and State Fiscal Distress.

Along the lines of Goldstone's proposal to quantify the forces leading to a crisis, the PSI encompasses a 'single theoretical framework' for the 'structural' evolution of society (Turchin 2013). Turchin's PSI framework seeks to follow "the general logic" of Goldstone's approach (Turchin 2013 and 2016). Through using Turchin's framework, our paper looks to do the same. As a whole, our paper's PSI index uses the same component segregation as Goldstone: Masses, Elites, and State.

Mass Mobilization Potential

Mass Mobilization Potential (MMP) measures the pressures arising from popular distress. Following the framework of Turchin (2013), we calculate a MMP for the United Kingdom from 1960 to 2015. The outcome of this computation reflects the aggregate effect of instabilities that emerge out of the general population. It includes components that quantify the effects of real purchasing power, demographic change and urbanization levels. In line with Turchin (2016) we believe these are, in sum, 'a good measure' of the general level of welfare.

The MMP component is comprised of three main factors: inverse relative wages, the urbanization rate and the age structure. All of these have equal weighting:

$$MMP = w^{-1} \frac{N_{urb}}{N} A_{20-29} \quad (2)$$

where w^{-1} is the inverse relative wage. Relative wage is the wage scaled by GDP per capita. The urbanization index N_{urb}/N is the proportion of total population (N) within the cities (N_{urb}). The last term, A_{20-29} , is the proportion of the cohort aged between 20 and 29 years in the total population. This quantity reflects the role of 'youth bulges' in the genesis of instability waves (on this see, e.g., Goldstone 1991 and 2002; Moller 1968; Mesquida and Weiner 1999; Korotayev et al. 2011; Grinin and Korotayev 2016).

Wages

For w^{-1} , we utilize the inverse of the average real wages from 1960 until 2015 after scaling them by GDP per capita. The wages are scaled by using average annual real earnings divided by a 3-year moving average of real GDP per capita. GDP per capita is lagged as wages are sticky. According to Turchin, "the lag should be at least 3 years (typical length of contracts negotiated between management and unions)" (Turchin 2013: 249). Consequently, we therefore assume a 3 year lag in order to calculate relative wages. The wage and GDP data we operate with comes from the Earnings for Britain database, *1209 to Present (New Series)* and is adjusted for inflation to 2010 local currency (£ GBP).

In MMP, the wage component is inverted, so that a decline in relative wages increases overall MMP. This is because masses tend to get more politically active

when income declines (Lewis-Beck 1998; Dutch and Stevenson 2008; Van de Brug et al. 2007).

While investigating the proxies that can affect real wages, we follow Turchin's implication that the latter are not only a function of GDP per capita. Wages also change as a result of demand and supply dynamics in the labor market and other extra-economic forces. Therefore, in evaluating the degree of correspondence between our model and the data, the relative wage dynamics are as follows:

$$W_{t+\tau} = a \left(\frac{G_t}{N_t}\right)^\alpha \left(\frac{D_t}{S_t}\right)^\beta C_t^\gamma \quad (3)$$

where G represents the real GDP of the UK and N is the total population for the equivalent year. Their ratio represents the demand and supply dynamics for the labor market.

C represents extra economic and political factors that can affect wage levels. The trend followed by real and minimum wages is likely to be influenced by the relations taking place between workers and employers in a given historical context. In sum, C can be defined as the "cultural and political attitudes towards the appropriate level of pay for unskilled workers" (Tuchin 2013: 266).

Given the importance of C and G in the context of British history, a discussion with various proxies to measure their effect on wage evolution is undertaken.

Urbanization

The second component of our MMP equation is the urbanization index. It measures the proportion of total population (N) within cities of 50,000+ people (N_{urb}).

This factor is taken into consideration because of the destabilizing impact that rapid urbanization may have on social structure (see, e.g., Grinin and Korotayev 2009; Korotayev et al. 2011; Turchin 2013). The data employed in this component is obtained from the World Bank data set (World Bank 2017).

Youth Bulge

Our last MMP component measures the proportion of people in the 20-29 age cohort of the whole population (A_{20-29}).

This is a fundamental element of the analysis. Turchin (2013) and Korotayev et al. (2011) observe how high numbers of young workers entering the job market bring a destabilizing effect on society. A large increase in labor supply generally tends to lower overall wage and welfare levels, thus increasing mobilization potential. Moreover, young people also tend to be more prone to radicalization. As noted by Jack Goldstone:

the rapid growth of youth can undermine existing political coalitions, creating instability. Large youth cohorts are often drawn to new ideas and heterodox religions, challenging older forms of authority. In addition, because most young people have fewer responsibilities for families and careers, they are relatively easily mobilized for social or political conflicts. Youth have played a prominent role in political violence throughout recorded history, and the existence of a “youth bulge” (an unusually high proportion of youths 15 to 24 relative to the total adult population) has historically been associated with times of political crisis. Most major revolutions ... [including] most twentieth-century revolutions in developing countries—have occurred where exceptionally large youth bulges were present (Goldstone 2002: 10–11; see also Goldstone 1991; Moller 1968; Mesquida and Weiner 1999; Heinsohn 2003; Fuller 2004; Korotayev et al. 2011; Korotayev and Zinkina 2011a and 2011b; Grinin and Korotayev 2012 and 2016).

The number of people in the 20-29 age bracket was calculated using UK ‘Population Pyramid’ data (UN Population Division 2015).

‘Relative Wage’ Evolution

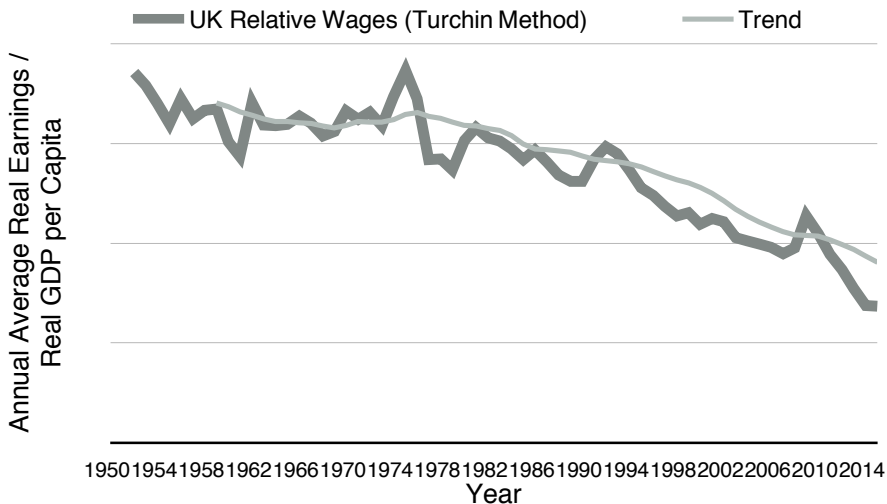


Figure 2. Relative Wage in the United Kingdom using the Turchin Method. Average Annual Real Earnings Adjusted (2012 £’s) and Average real GDP per Capita Adjusted (2012 £’s). Source: MeasuringWorth (Williamson 2017).

For Turchin (2013), one of the primary causes of rising social pressure is the decline in 'general well-being'. The economic aspect of well-being is measured by Turchin as 'relative wages' and plays a central role in his analysis (Turchin 2013 and 2016; see Nefedov 2015 for some other approaches). An understanding of relative wage evolution in the UK and the dynamic forces affecting its rise and decline can only be understood with a contextual analysis of British history.

The historical interaction between UK labor demand and supply reveals a similar reversal unveiled by Turchin in his analysis of US labor dynamics (Turchin 2013: 263). For much of the twentieth century, the demand for UK labor grew faster than its supply. This, however, was reversed in the 1960's. The processes that explain this reversal are almost identical to those unveiled by Turchin in the context of America. Steadily rising immigration levels and the advent of baby boomers have fundamentally changed the structure of 'internal demographic growth' (Turchin 2016). A significant aspect of the decline in relative wages can in part be explained by rising net migration levels.

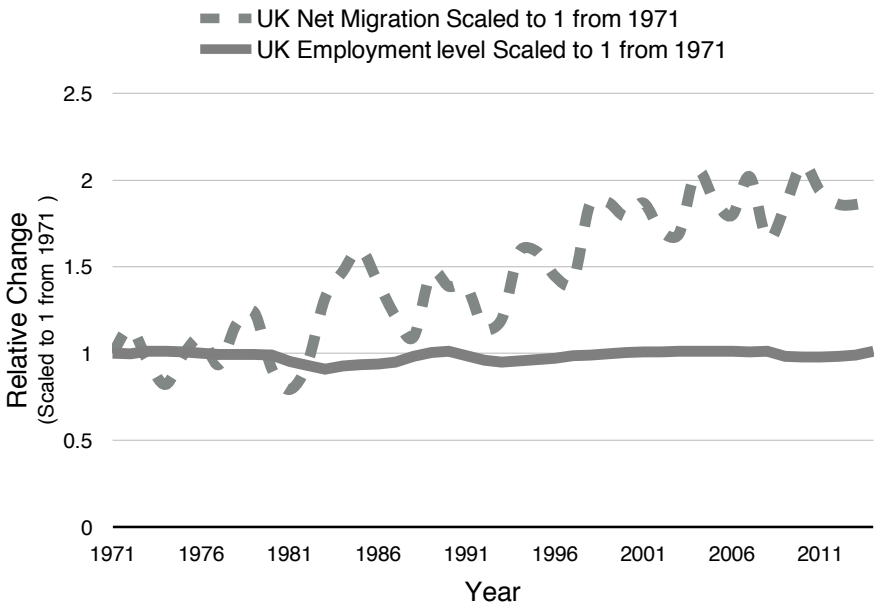


Figure 3. UK Net Migration and Employment Levels scaled to 1 from 1971. Source: National Archives Immigration Statistics and Office of National Statistics (ONS) Labour Force Survey.

'Post War Consensus', Strong Labor Unions, and Stable 'Relative Wages'

C has had a significant effect on the evolution of wage dynamics in all stages of our model. As Turchin (2013) suggests in his two broad explanations for 'relative wage growth', non-market or 'extra-economic' forces play a significant role in wage dynamics. The C variable reflects the operation of "coercive, political and ideological social power" (Tuchin 2013: 248) and cannot be overlooked in the context of British history.

Post war consensus, a term first coined by Paul Addison (1975), describes the model of political corporation that has dominated British history from 1945-1970. Theories developed in the 1930s by a new generation of economists, led by Keynes, had made their way into government policy (Addison 2010). In particular, the election of Atlee in 1935 launched a rising trend in favor of "strong labor unions, heavy regulation, high taxes and a generous welfare state" (Addison 2010: 246). The latter mode of economic governance had dominated the political scene under both the Labor and Conservative parties for over three decades following the war. Notably, under the post war consensus, the toleration of strong Labour Unions entailed that the moment had reached "peak membership, visibility, prestige and political power" during the post war era.

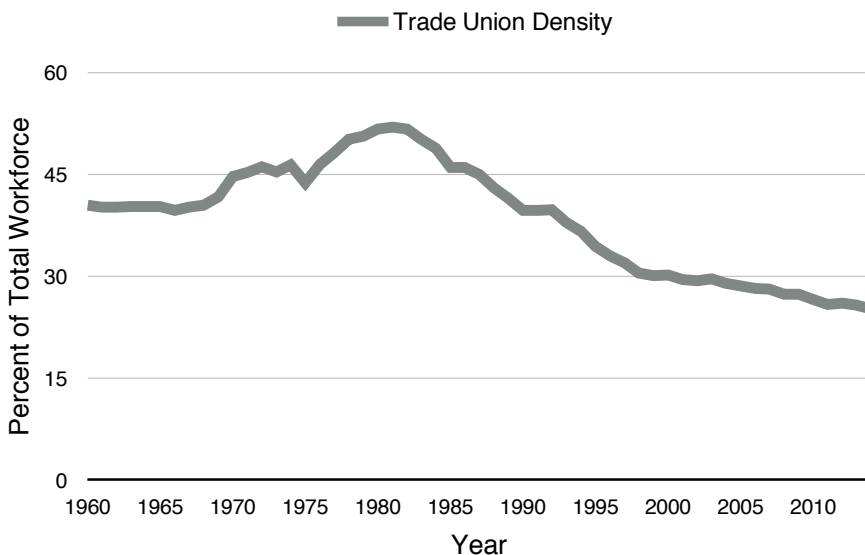


Figure 4. Percent of UK Labour Force in Trade Unions. Source: OECD Labour Force Statistics.

The early 1960s saw little change in wage dynamics, because the conservative Macmillan government played a relatively subdued role in economic governance, upholding the ‘post-war consensus’ (Addison 2010). However, in 1964 the election of the labor government under Harold Wilson saw a change of tack with regards to general working conditions. Under Wilson, government spending on social services rose faster than growth in GNP (Addison 2010). The introduction of social welfare benefits substantially improved the standards of low-income earners. In particular, the doubling of ‘family allowances’ in money terms contributed to an increase in disposable income (Hamon 1970). Consequently, from 1964-70 wages increased by 20% in real terms (House of Common’s Report 1971). The apparent increase in real wages towards the end of the 1960s is reflected in our data with an upward trend in relative wage towards the end of the 1960s. It is noted that Wilson “had a substantially better record than achieved by the preceding conservative governments” (Wilson 2010: 542) and this is clearly reflected in our data.

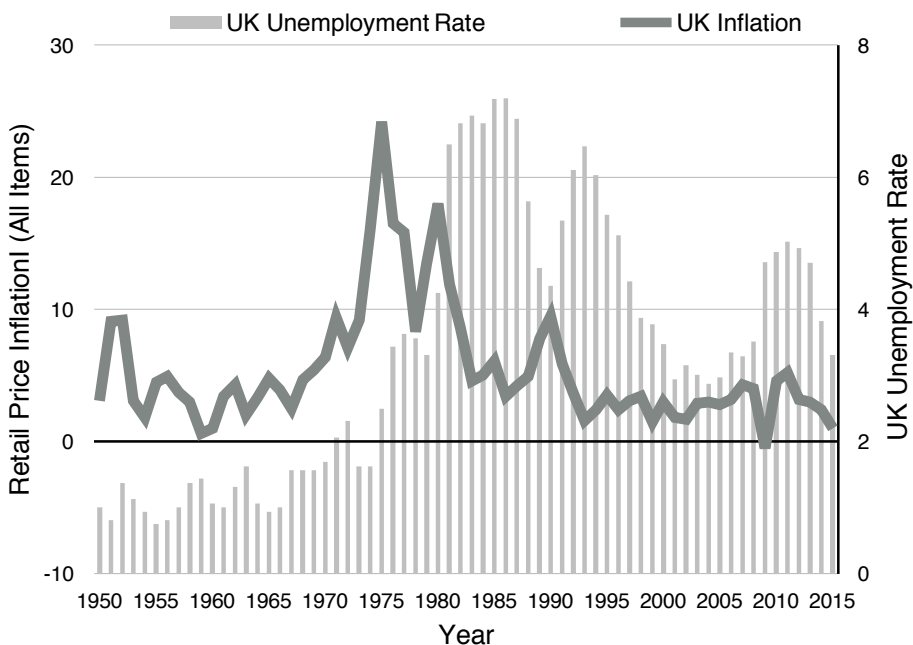


Figure 5. Retail Price Inflation, showing percentage change over 12 months and UK Unemployment (Indexed to 1 in 1950). Source: ONS Inflation Indices/Employment Statistics and National Archive Unemployment Rate.

The election of a conservative government in 1970 did not dramatically reverse the growing trend in favor of social welfare experienced in post war Great Britain. The introduction of the 'Family Income Supplement' in 1971 under the Heath government boosted low incomes on top of reforming various other benefits (Dixon and Scherwell 2002). Our data on real wage displays a continued increase in the early 1970s.

By 1973 the UK entered in a severe recession. The oil crisis and the fall of the Bretton Woods system in 1971 set economic forces into motion that led to 'stagflation'—unemployment with high inflation. With double-digit inflation, the UK trade deficit and national debt rose sharply along with a decline in wages.

The events of 1973 exerted significant pressure on the post war consensus; although economic growth by 1975 was reinstated, inflation remained double digit and overall progress slowed in face of a weakening post war boom (Addison 2010). Depleted currency reserves as a result of the 1964–1967 'Sterling Crisis' forced the British government to borrow heavily from the IMF whilst having to adhere to large spending cuts (Bordo 2009). As Kesselman et al. (2002) noted, the combination of 'sluggish post war growth' and IMF induced reforms brought an end to the British post war welfare state.

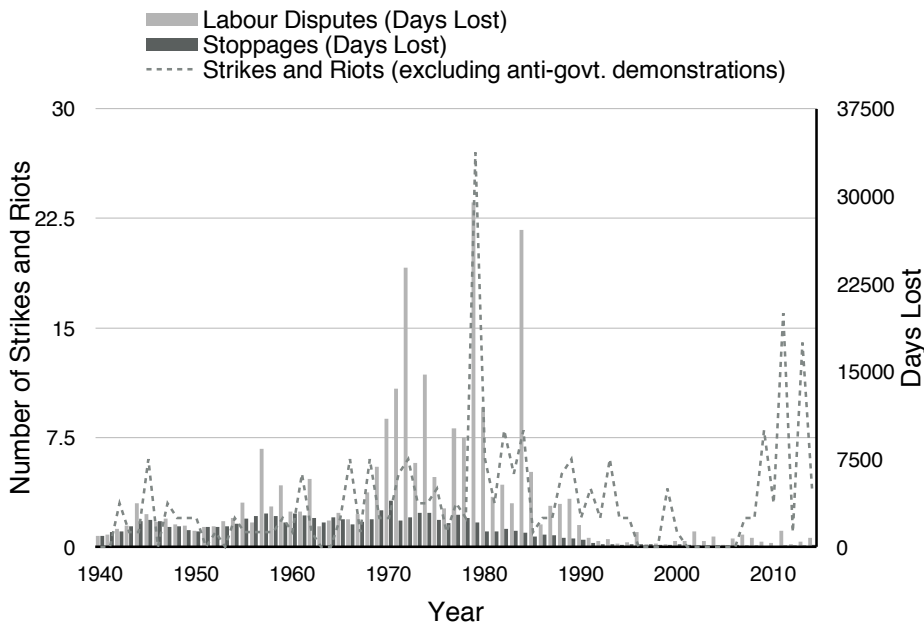


Figure 6. Labour Disputes with Private and Public Sector Stoppages, Strikes and Riots (excluding Anti-government Demonstrations). Source: CNTS Data and ONS Employment Dispute Statistics.

An attempt to curb inflation was led by Labor minister Callaghan under the 1971 'Attack on Inflation' plan (Addison 1975). From 1975-78 a series of negotiations with Trade unions attempting to cap wages ultimately culminated in large-scale unrest and strikes. This period of unrest peaked in the 1978-79 'Winter of Discontent' leading to the rise of the new right.

Economic Restructuring, Inequality and the Decline of 'Relative Wages'

The election of Thatcher brought an abrupt end to post war social and economic policy. The Thatcher reforms altered the course of economic governance to such a degree that it has been observed a 'post-Thatcherite consensus' still exists today where "no major political party has committed to reversing her work" (Kesselman et al. 2002). Thirteen years of un-relentless support for the free market most notably resulted in "large scale privatizations, the end of subsidies for unproductive industry and crippled Trade Unions" (Addison 2010: 457). Thatcher's economic policies accelerated the decline of industry and permanently altered the UK's economic structure.

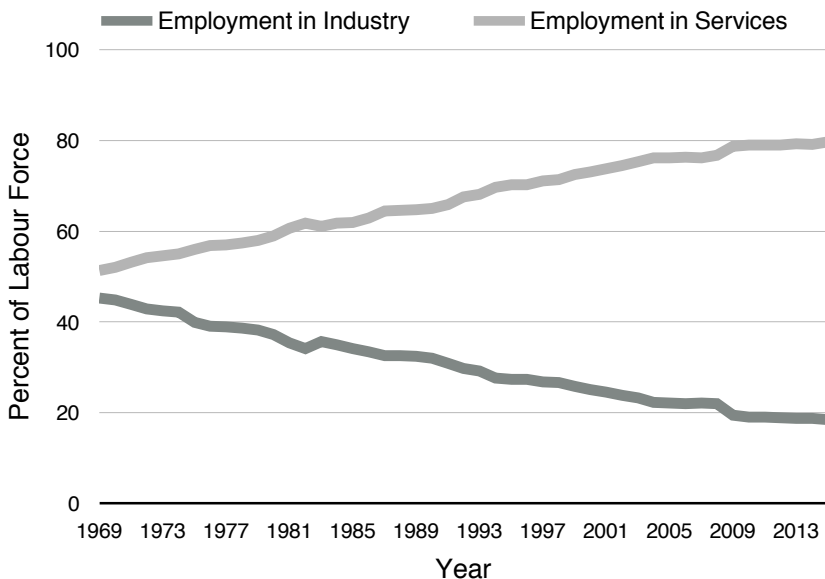


Figure 7. Percent of Labor Force in Industrial and Service Sectors. Source: World Bank Employment Datasets.

In the face of growing international trade, the deregulatory free-market approach to economic governance pursued by Thatcher's government helped raise GDP growth significantly: From 1979 to 1991 GDP grew by 29.4% (ONS statistics 2015). Privatization of key industrial sectors and reformed Labour Union legislation drastically reduced the share of workers in Trade Unions. As a consequence, the number days lost due to strikes, labor disputes and stoppages fell significantly.



Figure 8. Trade Union Membership (as % of Labour Force), Labour Disputes with Private and Public Sector Stoppages. Source: OECD Trade Union Statistics (2017) and ONS Employment Dispute Statistics (2017).

Although exponential GDP growth has succeeded in raising real wages, it has not been translated into rising 'relative wages'. As displayed in our data, relative wage has steadily declined since the 1970's. This can be explained by the substantive increase in inequality levels under Thatcher where the GINI coefficient rose dramatically. This notable increase in inequality levels is a persistent feature of the United Kingdom today and is discussed in further detail in the Elites Mobilization Potential section.

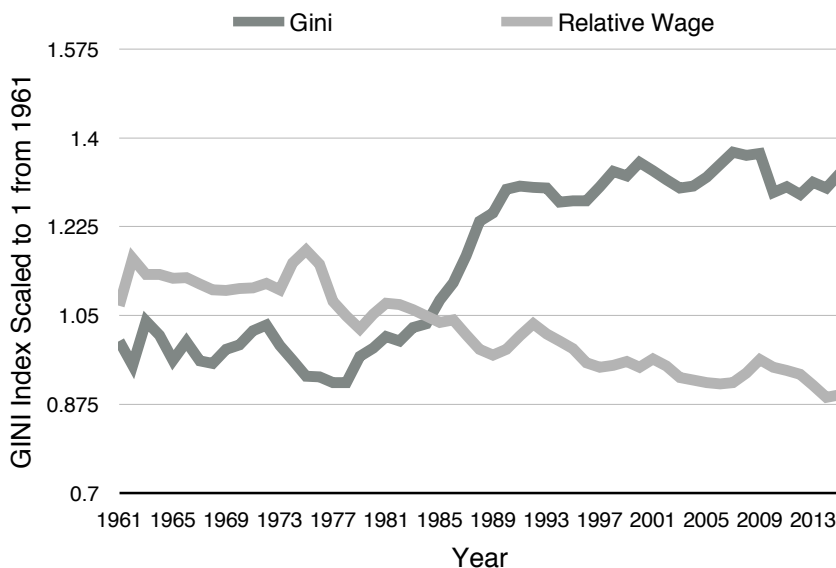


Figure 9. Change in Inequality, year-on-year GINI Index scaled to 1 (from 1961) with Relative Wage and Real Wages scaled to GDP per Capita (Turchin Method). Source: IFRS 2017.

Mass Mobilization Potential

Socio-economic restructuring led by the ‘New Right’ under Thatcher in the United Kingdom and President Reagan in the United States has resulted in the common evolution of income inequality patterns across both countries. Today, the US and the UK have very similar economic cycles due to the virtually identical sectorial break down of their economies: in 2015 the service sector accounted for 78.9% of the US GDP and 79.4 % of the UK GDP (World Bank Data 2016). Such structural similarity naturally yields a similar evolution of labor force and wage dynamics. Consequently, the decline of ‘relative wage’ observed by Turchin (2013 and 2016) and our data can be explained as a result of the common evolution in economic policies across both countries.

The Anglo-Saxon legal model frames economic governance with a tendency to ‘shore markets’ rather than ‘repress them’ (La Porta et al. 2001). The historical evolution of economic policy in favor of deindustrialization, deregulation, and the free market have increased income inequality at the expense of ‘relative wages’. Both rural depopulation as a result of deindustrialization and declining relative wages have had a marked effect on MMP.

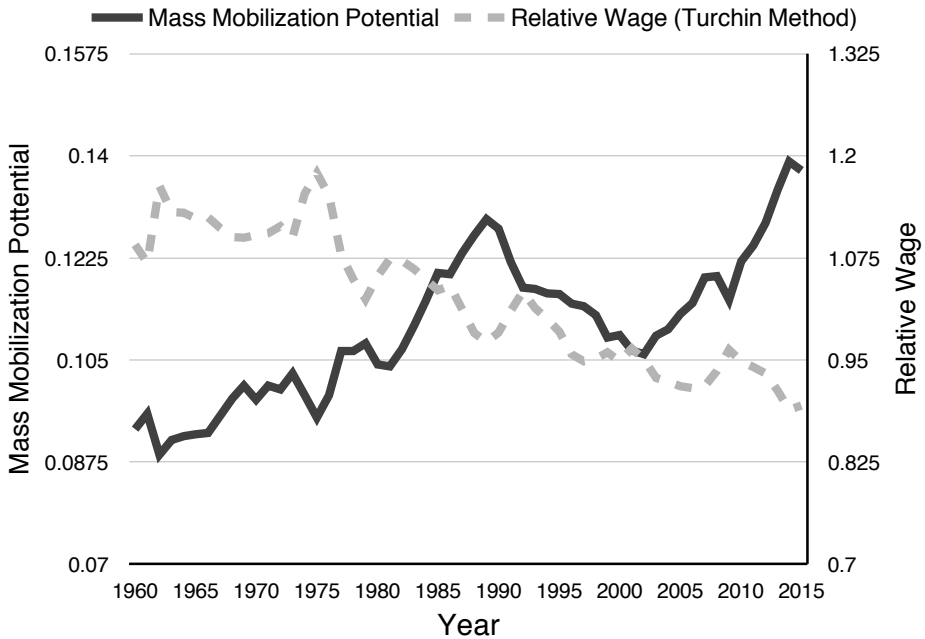
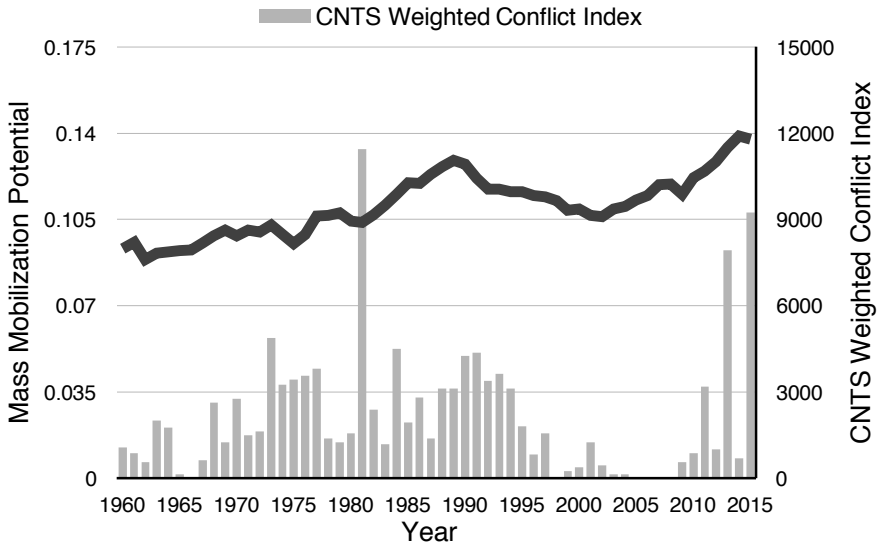
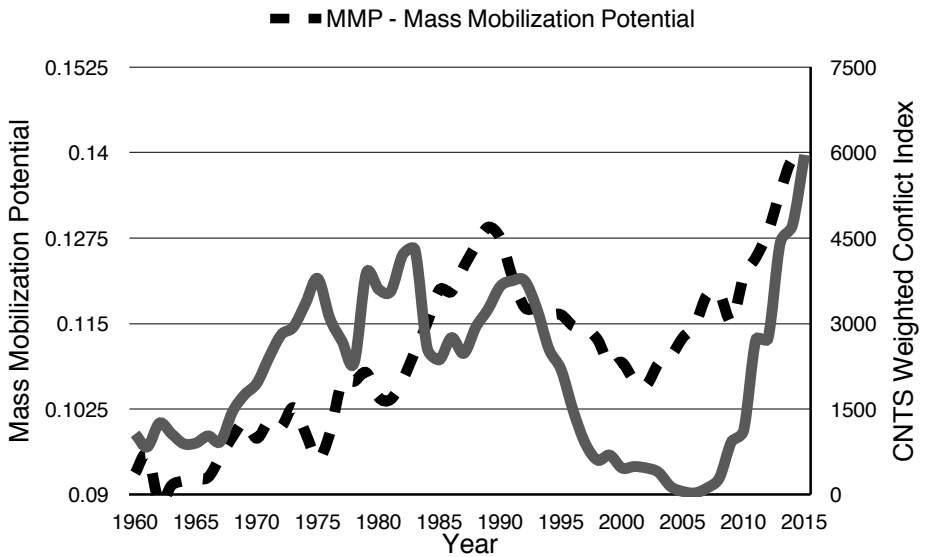


Figure 10. Mass Mobilization Potential and Relative Wage. Source: Authors' calculations.

Now let us see how the MMP dynamics correlates in the United Kingdom with the dynamics of actual sociopolitical destabilization that we will measure using the CNTS integral destabilization index (for the description of the methodology of calculation of this index see Appendix). See Figure 11.



a) with raw values of the CNTS integral destabilization index



b) with 5-year moving averages of the CNTS integral destabilization index

Figure 11. MMP and CNTS Integral Destabilization Index, 1960–2015. Source: Authors' calculations and CNTS database (Banks and Wilson 2017).

As we see, for Britain between 1960 and 2015 the value of MMP turns out to be a rather good predictor of actual level of sociopolitical destabilization in this country. The overall MMP growth in the 1960s, 1970s, and 1980s was accompanied by a rather pronounced trend toward an increase in the level of actual sociopolitical destabilization. A period of a rather pronounced MMP decline began in 1989 and continued for more than a decade. This was accompanied by a comparably pronounced decline of the actual sociopolitical destabilization, but with a noticeable lag (around 3 years). Note that the point that sociopolitical destabilization possesses some inertia was noticed some time ago (see, e.g., Turchin 2003 and 2005; Korotayev and Komarova 2004; Turchin and Korotayev 2006; Korotayev, Malkov, and Khaltourina 2006)—because of it, sociopolitical destabilization may continue or even grow for some time after its underlying factors start losing their strength. MMP resumed its growth in the early 2000s, which was followed (with a lag of about 3-4 years) by a pronounced increase in the levels of actual sociopolitical destabilization. An especially pronounced growth of both MMP and actual sociopolitical destabilization was observed after 2009.

Note that MMP demonstrates a much better correlation with moving 5-year averages of the CNTS integral destabilization index rather than with its unsmoothed values. This does not appear to be a coincidence. Indeed, MMP is a rather slow variable, whereas in case of actual destabilization we are dealing with a much faster one. MMP is Mass Mobilization Potential. Thus, its growth creates a potentiality of mass mobilization/sociopolitical destabilization, but, in order that this potentiality could be actualized, a number of other factors should be present. Thus, if the growth of MMP is observed, we have all grounds to forecast the growth of sociopolitical destabilization. We should therefore expect the growth of destabilization in the forthcoming years, but we cannot predict in which particular year (let alone month) an explosion of such a destabilization might take place.

Elite Mobilization Potential (EMP)

‘Elite Mobilization Potential’ measures the social pressures arising from elites. It primarily seeks to quantify the effects of ‘elite overproduction’ and ‘competition’ using relative income and demographic evolution (Turchin 2013). The outcome of this component indicates a measure of the aggregate pressures facing society when elites become destabilized and fight for scarce resources. In line with Turchin (2013), we believe EMP is a good measure of ‘general elite well-being’.

The Elite Mobilization Potential (EMP) is composed of two main factors: inverse elite incomes and relative elite numbers:

$$EMP = \varepsilon^{-1} \frac{E}{sN} \quad (4)$$

where ε^{-1} is inversed elite income, E —total elite numbers, s —the number of government employees per total population, N —the total population.

Elite Incomes

For the 20th century we utilize the inverse average elite incomes from 1960 to 2014 after scaling them by elite numbers. The relative elite wage is inverted in EMP so that a decline in the relative wage of elites causes EMP to rise. This is because elites tend to mobilize during periods of ‘unfavorable economic conjecture’ (Turchin 2013 and 2016). When average elite income declines, “intra-elite competition heats up, a few will garner an increasing share of rewards, while lower segments of the elites fall further and further behind” (Turchin 2013: 258), thus increasing Elite Mobilization Potential. It is important to note that ε is not a typical measure of income, because elites do not have a ‘typical income’. Rather, it reflects the level of intra-elite competition for resources (Tuchin 2013: 271).

To find elite incomes, wages of the general population are scaled by using average annual real earnings to a 3-year moving average of real GDP per capita. This gives us the same W component as in the MMP section and determines the ‘relative wage’ of the masses adjusted for ‘stickiness’. We then scale the inverse change of W on a year-by-year basis and obtain a net change in average elite income. The latter is in line with Turchin’s observation that a reduction in the ‘relative wage’ of commoners results in a positive increase in elite wages, providing elite numbers remain constant. The inverse W data is then scaled by elite numbers in order to determine the net change in ‘relative elite incomes’ or ε . As stated previously, ε^{-1} is then inverted, so that a decline in ‘relative elite income’ causes EMP to rise. The wage and GDP data we operate with come from the earnings for Britain database and are both adjusted for inflation in 2012 constant GBP.

While investigating the proxies that can affect relative wages, we follow Turchin’s observation that elite wages are “mostly determined by w and e ” (Turchin 2013: 252). Therefore, in evaluating the degree of correspondence between our model and the data, elite wage dynamics are understood as follows:

$$\varepsilon = \frac{1}{g} \frac{G - WL}{E} \quad (5)$$

where L is the size of the labor force. E is determined by W , which is the relative wage of workers scaled by GDP per capita, and ε , which represents elite numbers relative to the overall population. An in-depth discussion of the factors that

increase elite numbers relative to the general population, and in turn decrease their relative wages, is undertaken in the UK context.

It is important to note that we deviate from Turchin's framework in some aspects of our calculation for ϵ . We do not consider state footprint or the labor force's demographic change in computing surplus income available to the elite. This is because from the late 1940's until present, UK government spending as a % of GDP has remained at around 40% (Trading Economics Data 2017). Furthermore, Turchin observes that labor force demographics in relation to average wage have tended to "fluctuate within fairly narrow bands" (Turchin 2013: 251). Thus, we simplify Turchin's ϵ component in view of his comments and the shorter time span our model covers.

Elite Numbers

For e we measure the change in the elite population as a percentage of the total population. The change in elite population is governed as a result of upward social mobility. Turchin measures social mobility as an inverse relationship to the change in average real wages of the general population. This is because if "wages do not keep up with economic growth, the elite disposes of an increasingly large amount of economic surplus" (Turchin 2013: 250). When average real wages decline, wage declines more than real GDP growth and the elite become more prosperous. Conversely, when the average wage increases at a faster pace than GDP growth, there is "greater upward mobility for entrepreneurial commoners" (Turchin 2013: 250). Overall, e is governed by:

$$\dot{e} = \mu_0 \frac{w_0 - w}{w} \quad (6)$$

where w is average wage change and μ is the rate of social mobility. μ is based upon the inverse % change in the real average year on year wage. μ is computed as:

$$\mu = \mu_0 \left(\frac{w_0}{w} - 1 \right) \quad (7)$$

Overall, when wages decline from one year to another, w becomes smaller than w_0 , resulting in a larger μ value, so the inverse is taken. This indicates that as people become poorer in relation to GDP growth there is less upward mobility. The second \dot{e} component indicates that the larger the drop in average real wage in relation to GDP growth, the higher elite incomes are, which leads to larger numbers of elites in the population. Year-on-year social mobility change and

inverse relative wage change were both indexed to 1. They are then multiplied together in order to compute ‘net social mobility’ (Turchin 2013: 251).

While investigating the proxies that determine elite numbers, we follow Turchin’s implication that the latter are directly correlated to the decline in real relative wages. Consequently, a discussion of rising inequality in the context of Britain’s socio-economic evolution serves well in explaining how average real wage remains stagnant in the face of GDP growth.

Elite Numbers Discussion

Similar to Turchin’s data where “after 1980 the relative elite numbers begin to increase at an accelerating rate” (Turchin 2013: 270), our data shows a large increase in elite numbers after Thatcher’s first premiership. The reduction in ‘relative wages’ leads to a sharp increase in the number of elites because “essentially the shape of the e curve is determined by the shape of the w curve” (Turchin 2013: 270). However, the total income of elites fails to outpace their demographic growth, so the ‘pie’ they have to share does not satisfy their growing numbers (Turchin 2013). This explains the more pronounced reduction of ‘relative elite wage’ in comparison to the ‘relative wage’ of commoners.

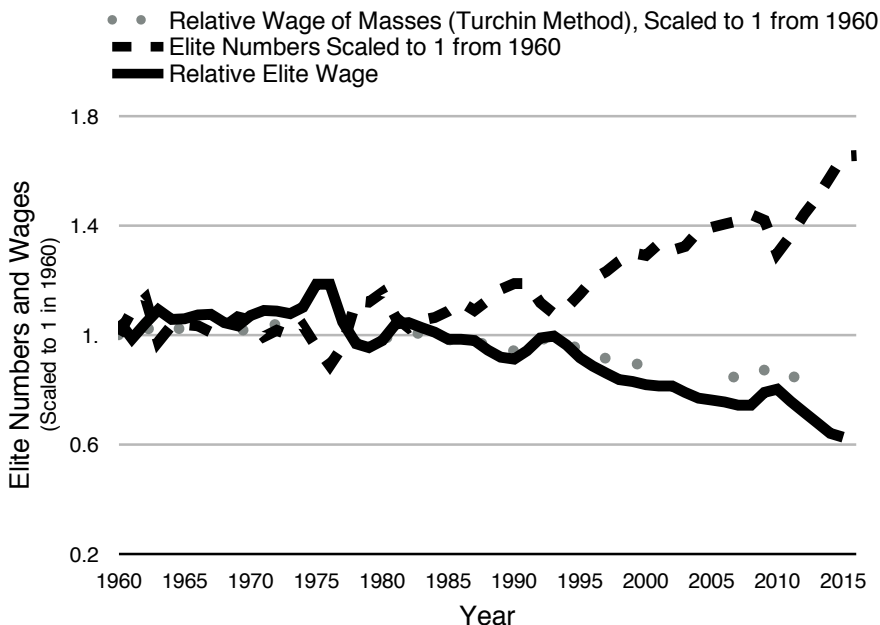


Figure 12. Elite Numbers, Relative Wages (Turchin Method) and Relative Elite Wage. Source: Authors’ calculations.

The sharp increase in elite numbers post 1980 can be explained as a result of macro-economic dynamics. As discussed previously, post 1970 Britain, in common with other industrial western nations, underwent dramatic socio-economic reorganization, which was in part accelerated by the end of the 'Post-War Consensus' (Addison 2010). In line with the macro-economic forces of 'Post Fordist' reorganization (Harvey 1987), Britain's economy experienced the rapid and sustained de-industrialization of its manufacturing sector. In turn, the service sector, in particular the financial, banking and legal industries experienced a boom. Stimulated by Thatcher's deregulation of the stock market, dramatic growth in international finance and its auxiliary industries further supported the rise of the new 'service class' (Urry 1995).

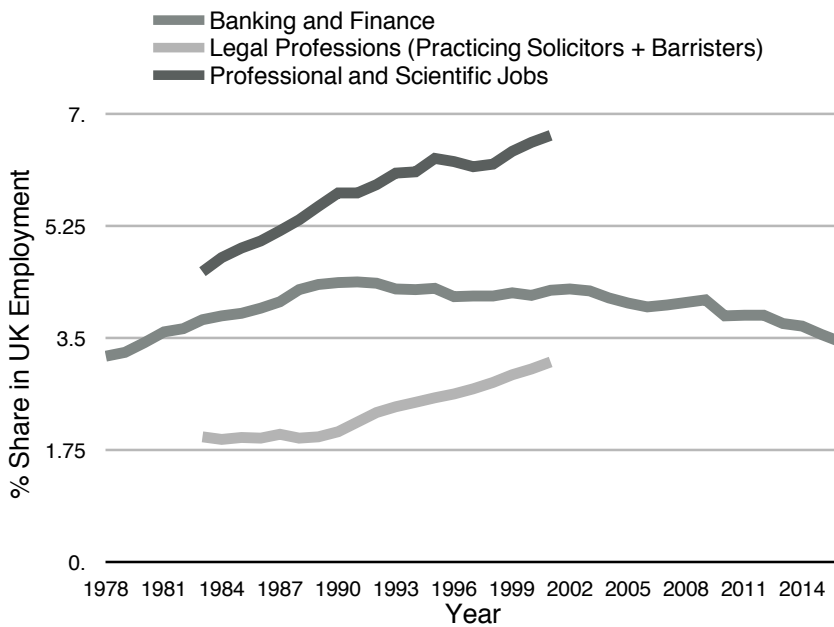


Figure 13. Number of People in Professional/Scientific Jobs, Banking/Finance Jobs, and Legal Professions. All scaled by Total Number in Labor Force (seasonally adjusted). Sources: ONS Employment Statistics and Guardian Data Blog (for Legal Professions).

Employment in London and the South-East of England, at the expense of traditionally industrial regions, grew massively as a result of Thatcher-induced deregulation (Ron Martin 1988). Moreover, the resulting boom in economic

growth was distributed unevenly among different socio-economic classes, leading to a significant increase in the GINI coefficient under Thatcher. Rising inequality levels have culminated in permanent self-reinforcing changes “in the economic, social and spatial organization of Britain” (Ron Martin 1988: 80). The self-reinforcing dynamics of geographic income inequality have been explained in detail by Massey (1979) in the ‘spatial division of labor’ paradigm.

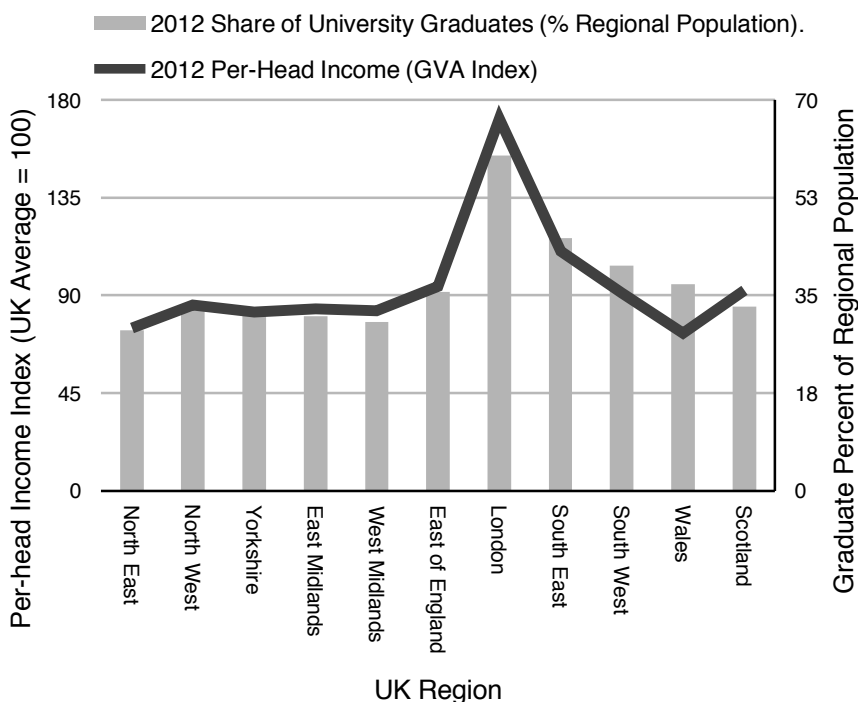


Figure 14. 2012 Regional Per-Head Income Index (GVA, UK Average = 100) and Share of University Graduates in Regional Population. Source: ONS Annual Population Survey Person Datasets and Income ONS Regional Income Datasets.

Broad trends of a social class divide with “increasing specialization in the high technology industry, research and development, and producer services, together with the more dynamic business climate, help account for the increase in high earning professionals and marginal occupation classes” across the South East (Ron Martin 1988). Our data clearly confirms the marked increase in elite numbers post-Thatcher and their geographical separation. Along the lines of Rosen (1981), we argue that a restructuring of the UK economy towards the ‘Post Fordist’ mode of flexible accumulation (Cloke and Goodwin 1992; Harvey 1987;

Thrift et al. 1997) has entailed that technological change increases the relative productivity and wages of the well-educated or skilled at the expense of the less skilled. Consequently, following a framework where “the shape of the e curve is determined by the shape of the w curve” (Turchin 2013: 270), the rise in UK elite numbers can be proxied by the dramatic divergence in wage progression of skilled and unskilled professions.

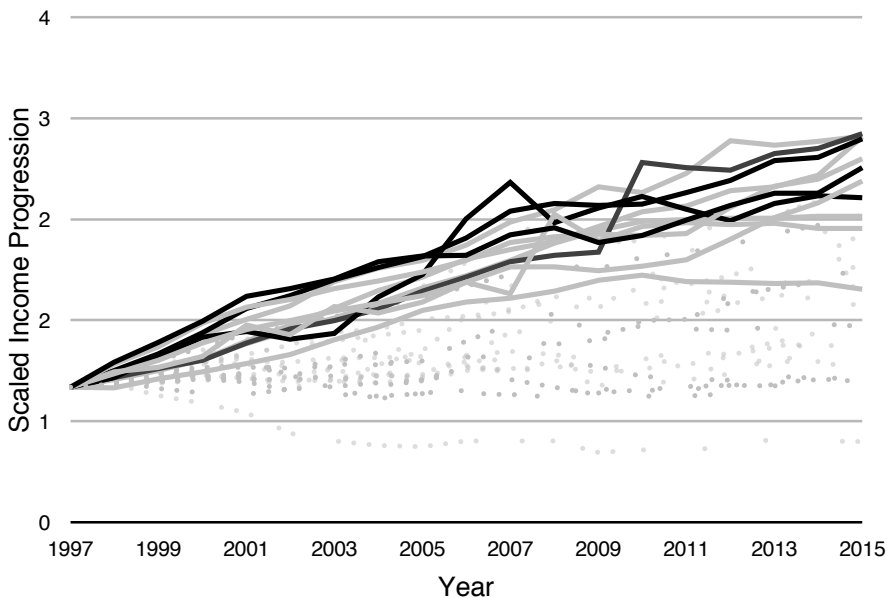


Figure 15. Scaled Change in Income of Employees in High (Dark), Medium (Grey) and Low Skilled (Dotted) occupations. Base Year 1997 = 1. GVA approach (Includes Social Contributions). Table of Sectors and Classifications in Appendix. Source: ONS Regional GVA Statistics.

Elite Incomes and Competition Discussion

The observed decline in relative elite wage or ϵ in our model results in a high inverse epsilon (ϵ^{-1}) value, which indicates rising intra-elite competition. This is caused by either “too small a pie that the elite divide among themselves, or too many eaters at the table” (Turchin 2013: 271). In view of exponential GDP growth in the UK context, our research tends to incline towards the argument that there are ‘too many eaters at the table’ (Turchin 2013 and 2016). Thus, elite incomes decline because the corresponding increase in economic resources available to them has not been as rapid as their demographic growth. Post 2008, our model

shows the relative income available for the elite declined at a faster pace than those of commoners, yet their numbers did not decline as substantially. Although contested by a certain group of academics (Stieglitz 2003; New Left Review 2013), official UK tax data shows the 2008 recession brought stagnation in elite incomes due to increasing regulation on pay and caps on bonuses. The marked decline in financial bonuses is a significant proxy for relative elite incomes. Bell and Van Reenen (2013:19) argue:

In 2008, 28% of all top percentile earners in the UK were London bankers. But this dramatically understates their importance in the rise in overall wage inequality during the last decade. We estimate that somewhere between two-thirds and three-quarters of the overall increase in the share of wages taken by those in the top percentile have accrued to bankers.

Stagnating financial sector bonuses in comparison with other bonuses and the decline in the pretax income of the top 1% displays how elites are currently undergoing a period of unfavorable ‘economic conjecture’ (Turchin 2013). The data clearly underlines our model’s recent increase in elite mobilization potential.

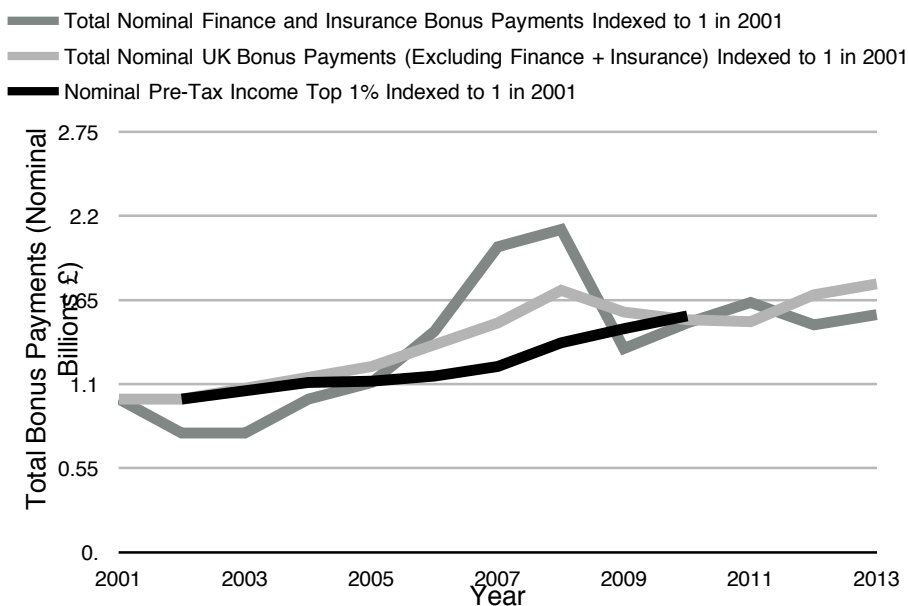


Figure 16. Total Bonus Payments in Billions (Nominal GBP £) Scaled to 1 in 2001 and Top 1% Pre-Tax Income bracket (Nominal GBP £). Source: Wages Survey ONS and UK Income Tax Data ONS.

Despite the economic contraction during the recession period, ‘elite aspirant’ numbers have not declined, thus contributing to even more competition for fewer resources. The latter process has been a result of the current government’s drive towards the ‘knowledge economy’ with the creation of a high-skilled workforce (House of Commons Report by the Chancellor of the Exchequer 2015). The number of university graduates as a share of the total population has been consistently increasing, creating a more competitive environment for the current elite. This places further downward pressure on the economic resources available to the elites, thus further increasing wage decline or inverse epsilon (ϵ^{-1}).



Figure 17. Relative Elite Wage (Epsilon, Turchin’s Method) and Share of University Graduates in UK Total Population. Source: Authors’ calculations and ONS Annual Population Survey Person Datasets.

Moreover, the current trend towards the knowledge economy has created ‘elite oversupply’. There are now fewer jobs available for elite aspirants. Thus, there is increasing danger of counter-elites or “radicalized aspirant elites, whose aspirations to secure an elite position/status have been frustrated” (Turchin 2013: 244). This further compounds the nature of elite mobilization potential and underpins the current upward trend in EMP, which is likely to increase further as competition heats up.

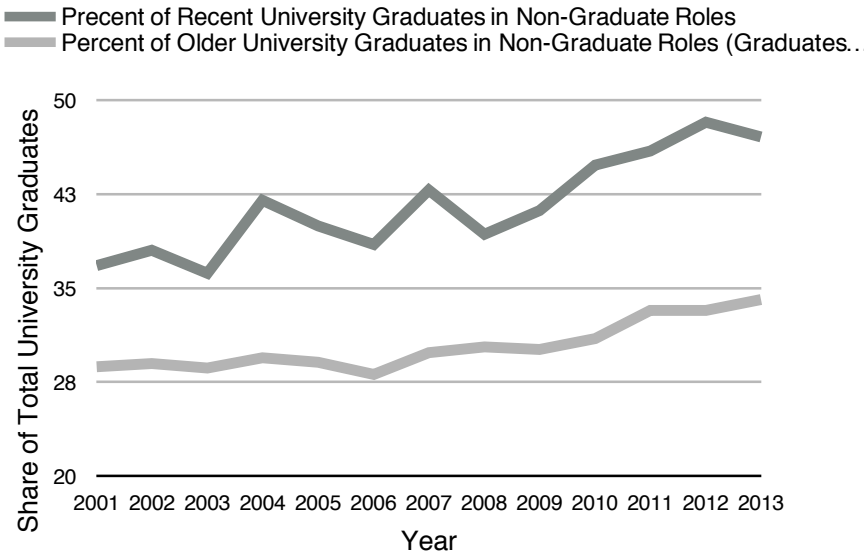


Figure 18. University Graduates in Non-Graduate Roles (Non Graduate Role: “A role as one which does not require a higher educational background.” Labor Force Survey Person Datasets). Source: ONS Labor Force Survey.

State Fiscal Distress (SFD)

The third component of PSI is the State Fiscal Distress and consists of two sub components. Following the framework of Turchin (2013: 247), we operate with UK national debt scaled to the GDP and ‘Public Distrust’. The first variable seeks to qualify relative fiscal distress and the second variable seeks to quantify the degree of distrust that commoners and elites have in state institutions. The outcome of this computation reflects the pressures arising from state related variables. Turchin notes that the combination is important because “growing distrust in state institutions is particularly worrisome... It can combine with exploding public debt in unpredictable ways” (Turchin 2013: 274).

The formula for SFD is:

$$SFD = \frac{Y}{G} D \tag{8}$$

where Y is the total public debt, G is the GDP, and D is a measure of public distrust in the state.

We calculate the first component using National Debt and GDP data from the ONS (Office of National Statistics). The second component is 'Public Distrust' in the state and is substituted by general election turnout percentage from the ONS. The components are then multiplied together so that an increase in debt and distrust levels leads to a higher SFD value.

It is important to note that we deviate from Turchin's (2013 and 2016) framework in our computation of 'Public Distrust'. The lack of UK year-on-year public distrust surveys has led us to use voter turnout in general elections as a proxy for 'Public Distrust'. Grönlund and Setälä's (2007) study shows that levels of distrust and voter turnout are strongly correlated (see also Kong 2014). The cross-national study of 22 European democracies finds that 'perceived legitimacy' or 'diffuse support' has a strong positive correlation with election turnout. Accordingly, we find that general election turnout is a sufficient proxy variable for public distrust. We use general election turnout data on a running four-year basis to compute a year-on year distrust variable.

Discussion on Public Debt

Just like the US, where 'national debt behaved in a very predictable way', increasing during war periods and then 'quickly repaid during the post war years' (Turchin 2013: 274), the UK debt to GDP level remained relatively low during the era of post war peace. Moreover, post 1980, the UK embarked upon a period of steady growth, which, combined with Thatcher spending cuts, upheld the low government debt levels.

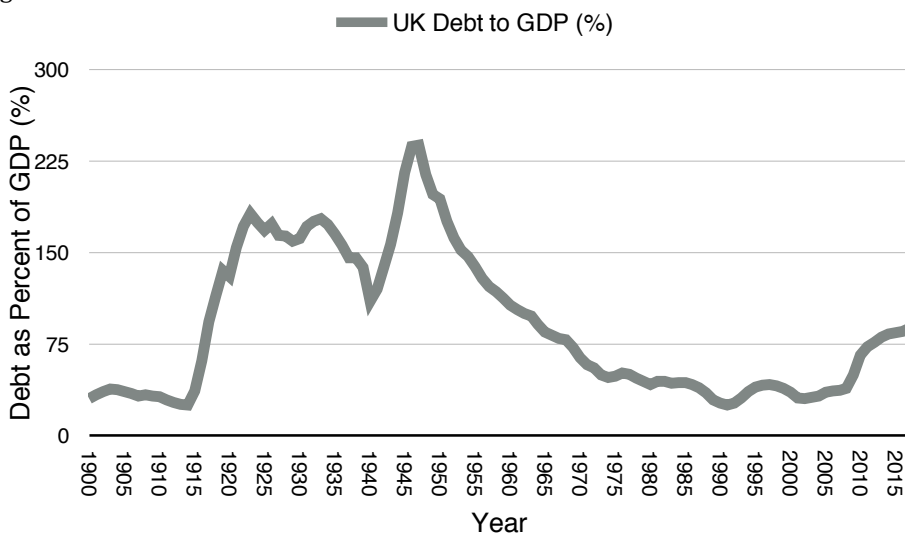


Figure 19. Historical UK Debt to GDP Ratio. Source: ONS Public Finance Database (2017)

A change of tack was brought about with the advent of the 2008 recession, which led to an unprecedented spike in peace time borrowing. The 2008 bank bailout, economic stimulus package, and Quantitative Easing (QE) warranted a substantial increase in government borrowing from 2009 onwards, in order to promote a recovery in economic growth. Although government borrowing has been steadily declining from almost £144 billion in 2009, i.e. 9.9% of GDP, to slightly more than £ 57 billion in 2016, or 2.6% of the GDP (UK Government Spring Budget 2017), the overall debt to GDP levels are still rising. As a consequence of recession, UK public sector debt has gone from 36% of GDP in 2007, to 60.7% in 2009, and eventually 85.9% in 2016. As of today, total outstanding debt accounts for more than £1.6 trillion (UK Office for National Statistics), an unprecedented sum in UK history.

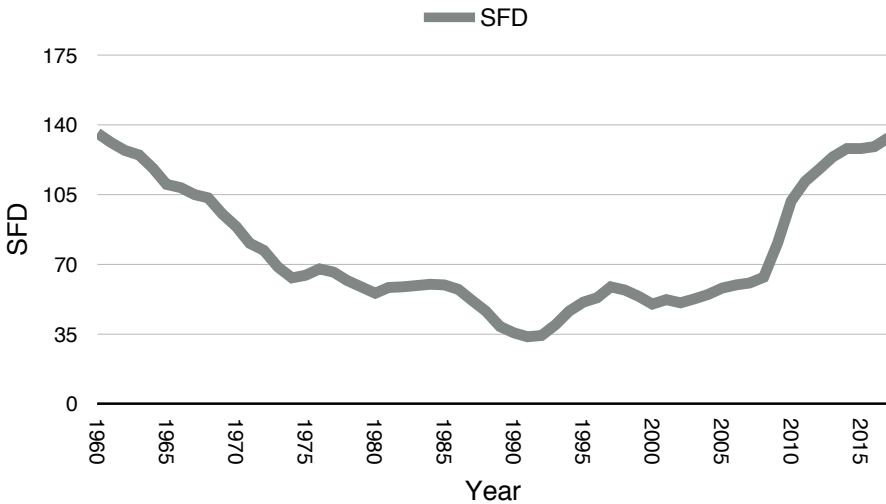


Figure 20. 1960-2015 State Fiscal Distress. Source: Authors' own Calculations.

Our model correctly displays the rising trend in 'State Fiscal Distress' as a result of the current unsustainable debt levels. According to the analysis undertaken by the UK Office for Budget Responsibility, if policies to improve economic growth are not successfully taken, the current demographic trends, led by the upcoming retirement of the baby-boomers and an extension of life expectancy, will cause immense pressure on public sector debt and will make its unsustainable upward trajectory continue further. The ONS predicts that under the current UK growth

trajectory, the debt : GDP ratio is set to become almost three times as big over the next 50 years (UK Office for National Statistics and UK Office for Budget Responsibility Report 2017).

UK Government Distrust Discussion

In the UK context, voter turnout, our proxy for ‘Public Distrust’, was generally stable from 1945 to 2001. The steady decline in turnout from 2001 onwards has also been marked by increasing public distrust. Consequently, the number of protests and demonstrations has been growing in line with the fall in trust in government institutions. If the evolution of motives in anti-government protests were to be observed on an imaginary timeline, one would note that the main demonstrations marching through the streets of the capital between the 1960s and the 1980s were concerned with topics such as world peace, the Vietnam War, and banning nuclear programs (Addison 2010).

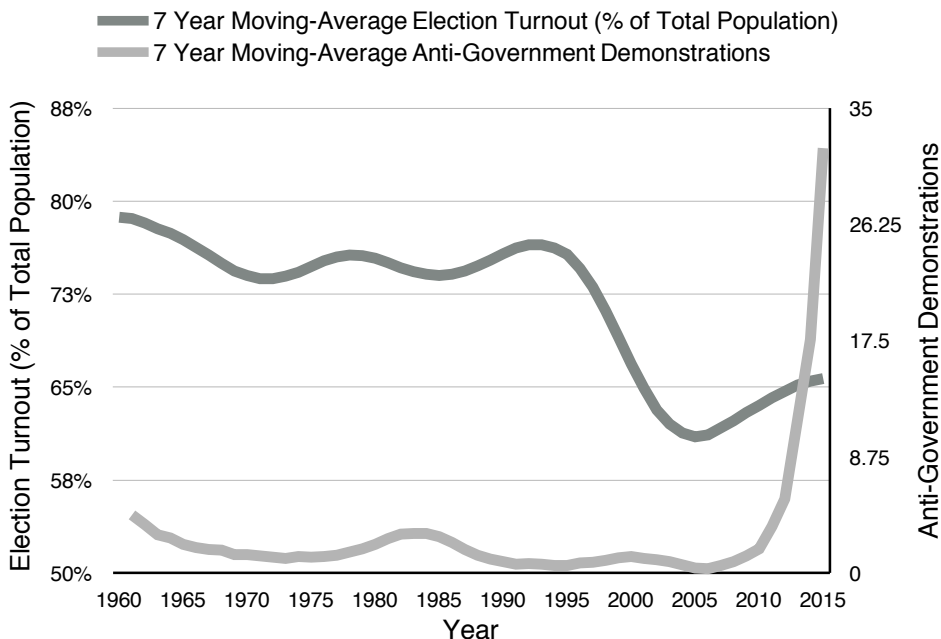


Figure 21. General Election Turnout (% of Total Population) and Number of Anti-Government Protests (5 Year Moving Average). Source: General Election Turnout (ONS 2015) and CNTS Cross National Time series Database (2017).

Afterwards, the first main protest triggered by discontent with the government was the anti-poll tax, which took place on 31 March 1990 and was accompanied by violence and riots between the police and the participants. Such unrest is generally believed to have contributed to the resignation of Margaret Thatcher on 28 November the same year and to the abolition of the tax by her successor John Major. In the following years, the motives of the main demonstrations returned to international issues like wars and globalization ("stop the Afghanistan war" in 2001; the "May Day" anti-capitalism protests in 2001; "stop the Iraq war" in 2003). However, towards the end of the 2000s, the UK population started taking to the streets out of dissatisfaction with government policies again (education spending cuts and university fees were the central topics of the 2010 protests).

In March 2009, the "Put People First" march took place. It was connected with themes such as "jobs, justice and climate" and described as "the biggest mass demonstration since the beginning of the economic crisis" (The Guardian 2009). The rally meant to convey a message to world leaders, who were about to gather in England for the upcoming G20 summit.

The most significant anti-UK government protest took place in 2011, when the 2010-elected coalition government led by David Cameron opted for a reduction of public spending, aimed at reducing the deficit. This led about a quarter of a million people to assemble in what is known as the "anti-cut protest" or the "March for the Alternative" (The Guardian 2011) and was described by many commentators as the biggest union-organized demonstration in London since World War II. The main aim of the protests was to show the government that an alternative way to severe public spending cuts was possible even in times of economic recession. An even more intense round of unrest followed, which includes the Occupy London Protest and UK Public sector strikes. Eventually, at the height of unrest, the term "Broken Britain" was coined to describe the perceived widespread state of social decay in the United Kingdom.

Consider now the dynamics of the resultant Political Stress Indicator (PSI) for the UK in 1960–2015 (see Fig. 23). As one can see, the UK PSI dynamics would allow us to predict very well already in the late 2000 the spike of sociopolitical destabilization in this country in the 2010s. Note also a very close parallelism between the PSI dynamics in the UK and the USA (compare Figs. 22 and 23). As will be discussed in the conclusion, this can be hardly regarded as coincidental.

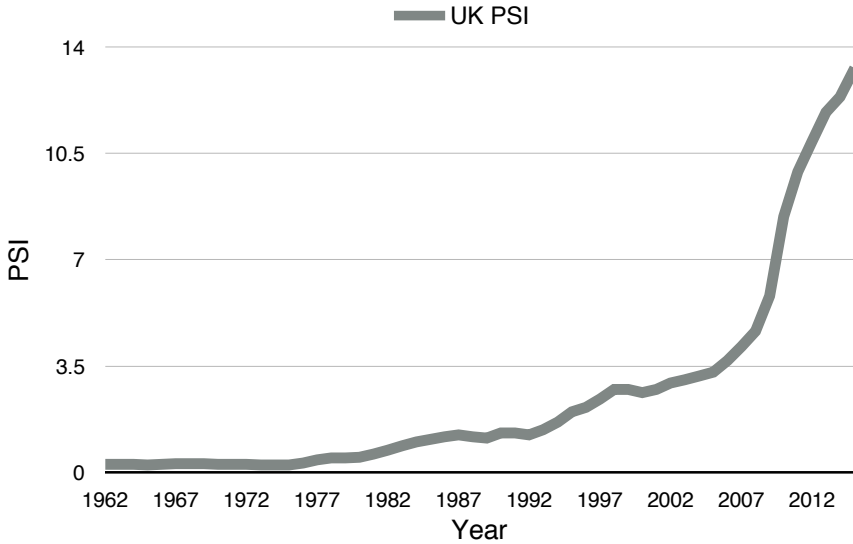


Figure 22. Political Stress Index (PSI) dynamics in the United Kingdom, 1960–2015, Source: Authors calculations.

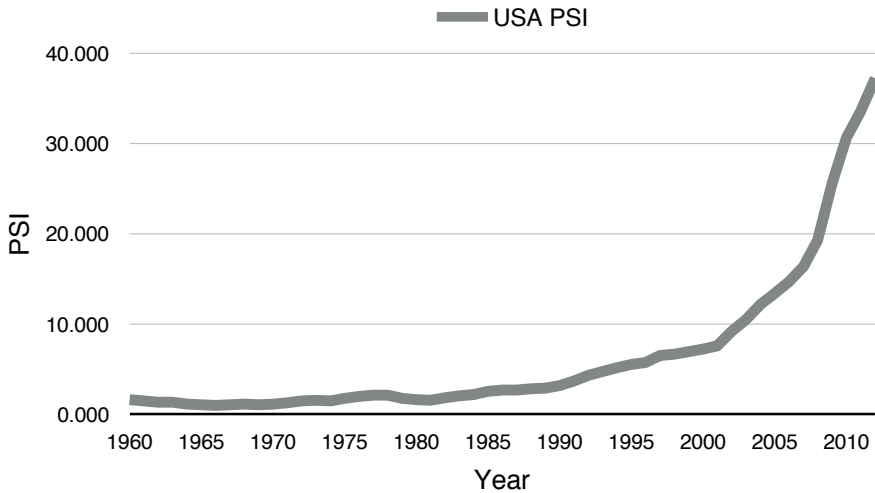


Figure 23. Political Stress Index (PSI) dynamics in the United States, 1960–2012. Source: PSI Data kindly provided by Turchin (2017).

As one can see, the UK PSI dynamics would allow us to predict very well, already in the late 2000s, the spike of the sociopolitical destabilization of the 2010s. As will be discussed in the conclusion, this can hardly be regarded as coincidental.

However, comparing the dynamics of the British PSI (Figure 22) with the dynamics of actual sociopolitical destabilization (measured with the integral CNTS index of sociopolitical destabilization, see Figure 24) one cannot fail to notice that, even though the British PSI serves as a very good predictor of sociopolitical destabilization in the United Kingdom in the 2010s, it would not have been able to describe theoretically either a very substantial increase in the levels of actual sociopolitical destabilization that was observed in Britain in the 1970s and 1980s, or a very substantial decrease of the levels of sociopolitical destabilization that Britain experienced in the 1990s and the early 2000s. Note that this is equally true of Turchin's model, which fails to describe either a dramatic growth of sociopolitical destabilization in the USA in the 1960s, or a very substantial decline of it after 1968.

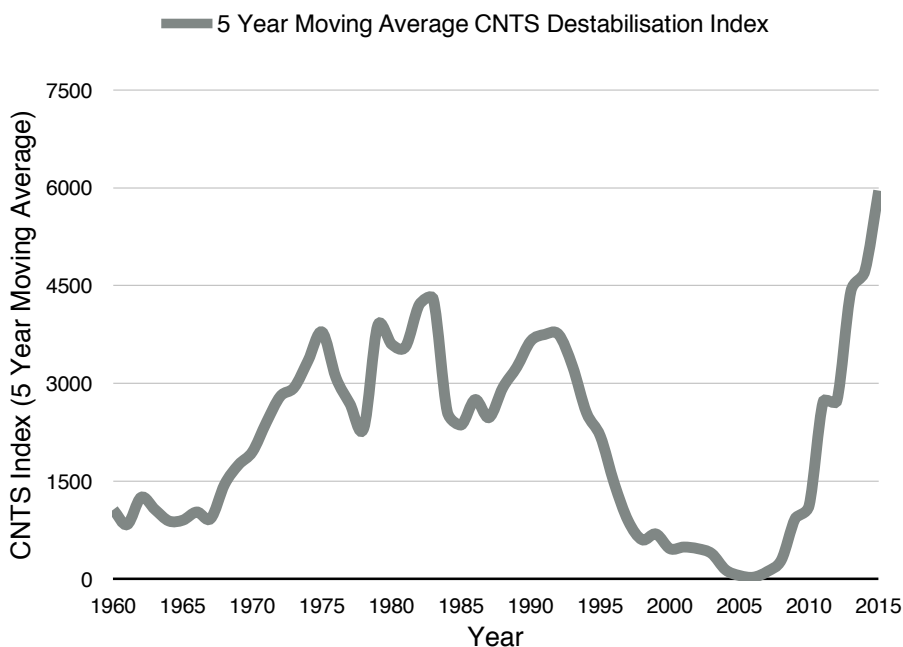


Figure 24. Dynamics of Integral CNTS Sociopolitical Destabilization Index (5 Year Moving Averages) for the United Kingdom. Source: Authors' calculations and CNTS Database (Banks and Wilson 2017).

Note that the fit between the theoretical and empirical curves can be substantially improved if we ascribe different weights to different components of the PSI. This could be done by the following change of equation (1):

$$\Psi = MMP^{\alpha} \times EMP^{\beta} \times SFD^{\gamma} \tag{9}$$

where different weights can be conferred to the different PSI components by assigning different values to parameters α , β , and γ .

Our numerical analysis of this model indicates that the fit between the theoretical and empirical curves may be significantly improved when we assign higher values to α , much lower values to β , and especially low values to γ (see Figure 25).

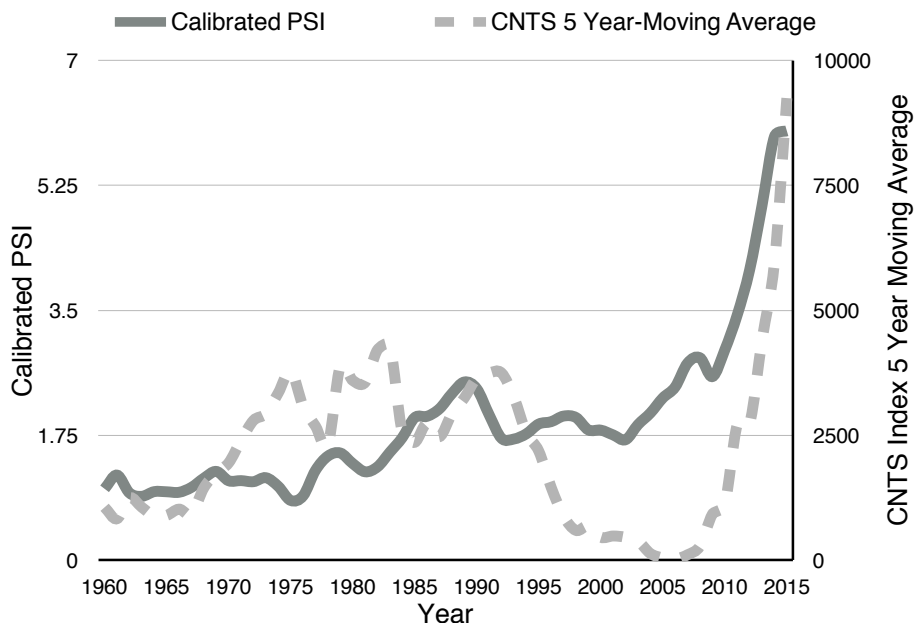


Figure 25. Calibrated PSI and 5 Year Moving Average CNTS Destabilization Index. Source: Authors' calculations and CNTS Database (Banks and Wilson 2017). Note: $\alpha = 3$; $\beta = 0.5$ $\gamma = 0.2$.

This suggests that within the sociopolitical history of Britain in the recent decades the overall level of sociopolitical destabilization might have depended more on the MMP than on the elite mobilization potential (EMP), whereas the role of state fiscal distress (SFD) might have been the least important.

What the Modeling of Social Pressures Toward Political Instability in the UK and the USA can Tell Us About the Global Destabilization Wave of the 2010.

Of course, it appears important to consider the sociopolitical destabilization of the 2010s in Britain and USA in the global context.

As has been shown earlier (see, e.g., Ogien and Borisenkova 2014; Anufriev and Zaytsev 2016; Korotayev, Shishkina, and Issaev 2016; Sadovaya 2016; Akaev et al. 2017), the Arab Spring acted as a trigger for a global wave of socio-political destabilization, which significantly exceeded the scale of the Arab Spring itself and affected absolutely all the World System zones. After the beginning of the Arab Spring, explosive global growth was observed for the overwhelming majority of indicators of socio-political destabilization, such as for anti-government demonstrations, riots, or general strikes (see Figs. 26–28).

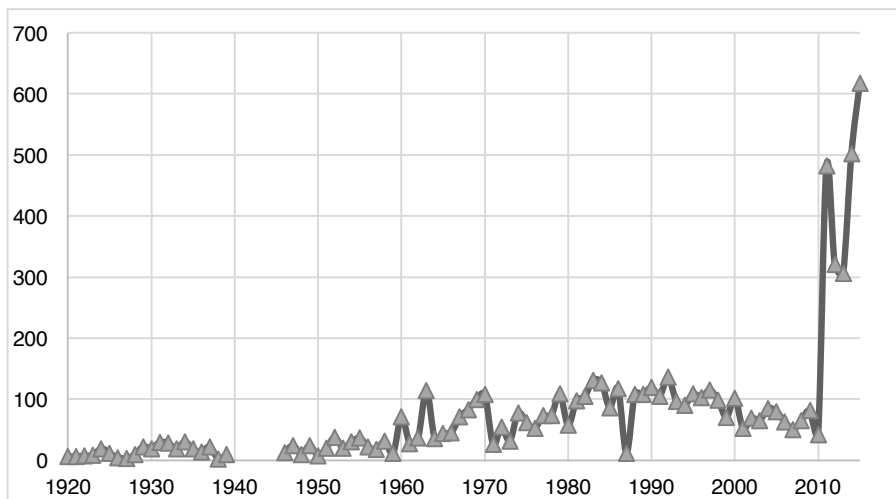


Figure 26. Total number of major anti-government demonstrations recorded in the world by CNTS, 1920-2015. Source: CNTS Data (Banks and Wilson 2017).

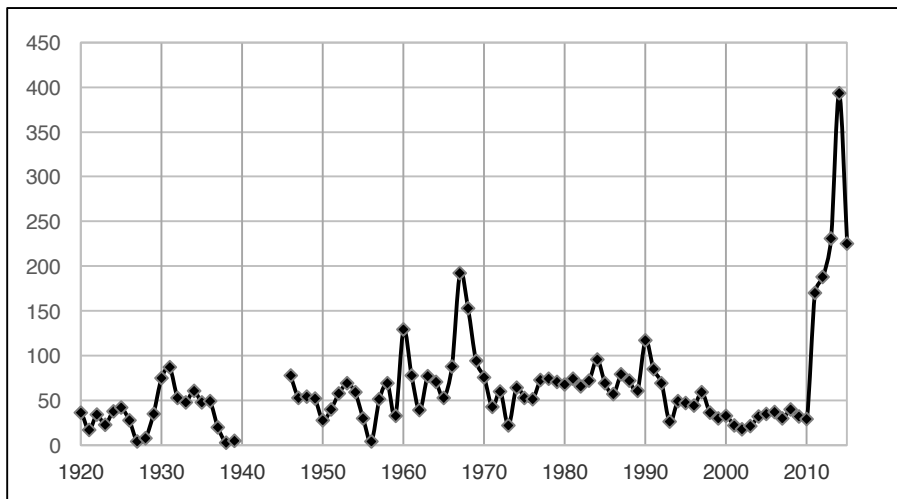


Figure 27. Total number of major riots recorded in the world by CNTS, 1920-2015. Source: CNTS Data (Banks and Wilson 2017).

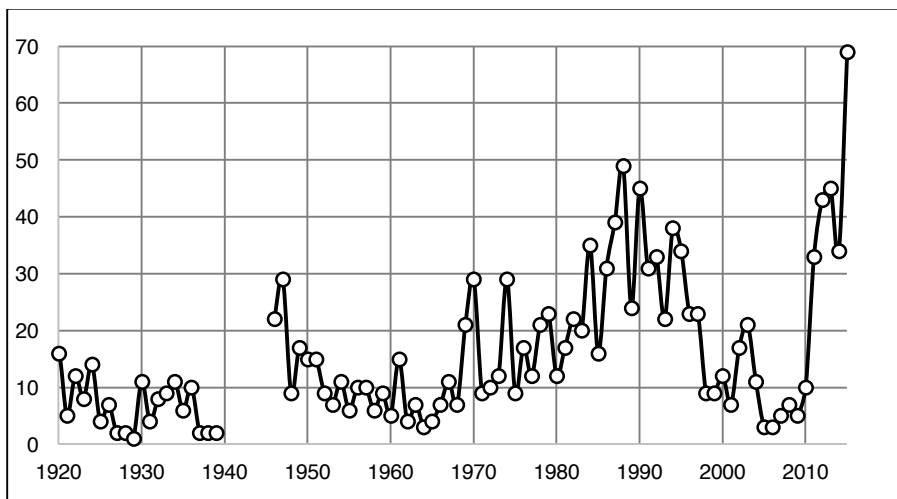


Figure 28. Total number of general strikes recorded in the world by CNTS, 1920-2015. Source: CNTS Data (Banks and Wilson 2017).

It is important to stress that only in 2011 was the growth of the global number of large-scale anti-government demonstrations, riots, and general strikes to a high degree (although not entirely) due to their growth in the Arab world. In the ensuing years, the Arab countries rather made a negative contribution to a very

noticeable further increase in the global number of large-scale anti-government demonstrations, riots, and general strikes (the global intensity of all these three important types of socio-political destabilization continued to grow despite the decline in the Arab world). Thus, for all these three important indicators of socio-political destabilization, the scale of the global echo of the Arab Spring has overshadowed the scale of the Arab Spring itself (see Figures 29–31):

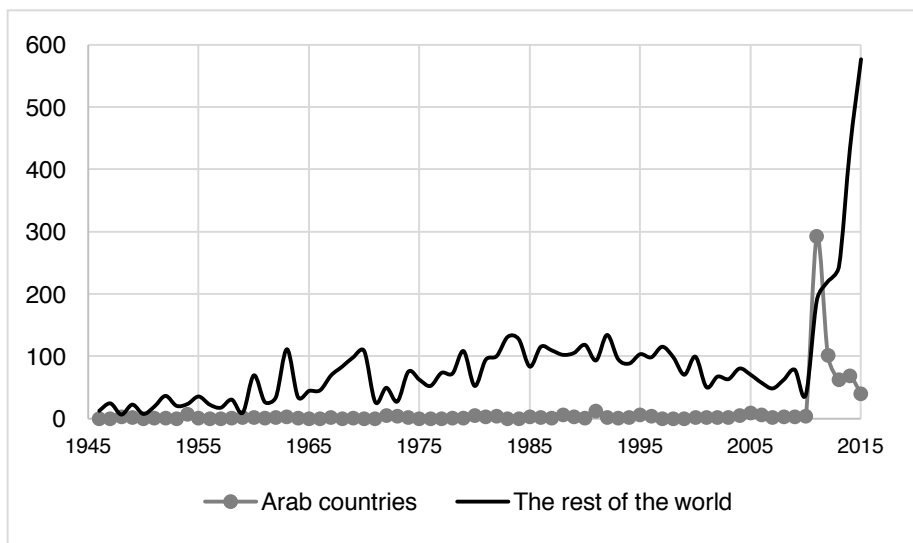


Figure 29. Total number of major anti-government demonstrations recorded in Arab countries and the rest of the world by CNTS, 1946-2015. Source: CNTS Data (Banks and Wilson 2017).

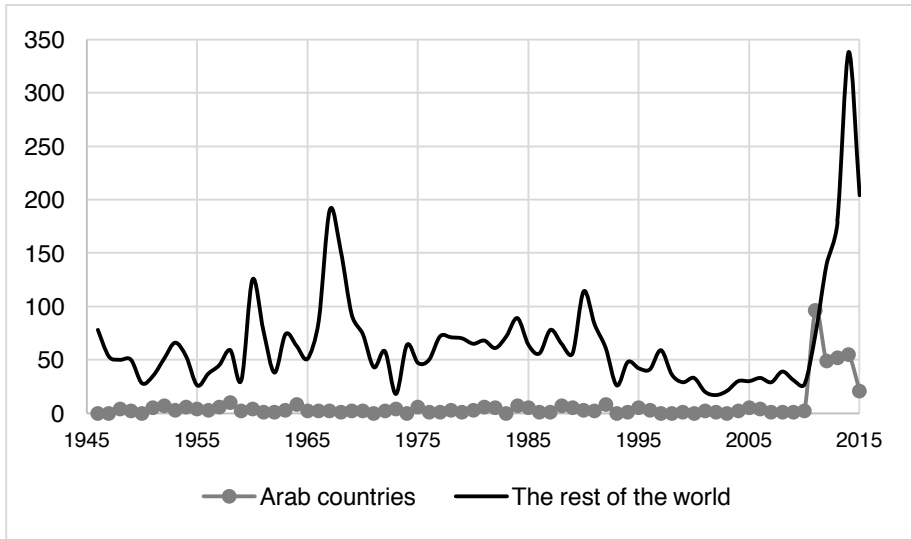


Figure 30. Total number of riots recorded in Arab countries and the rest of the world by CNTS, 1946-2015. Source: CNTS Data (Banks and Wilson 2017).

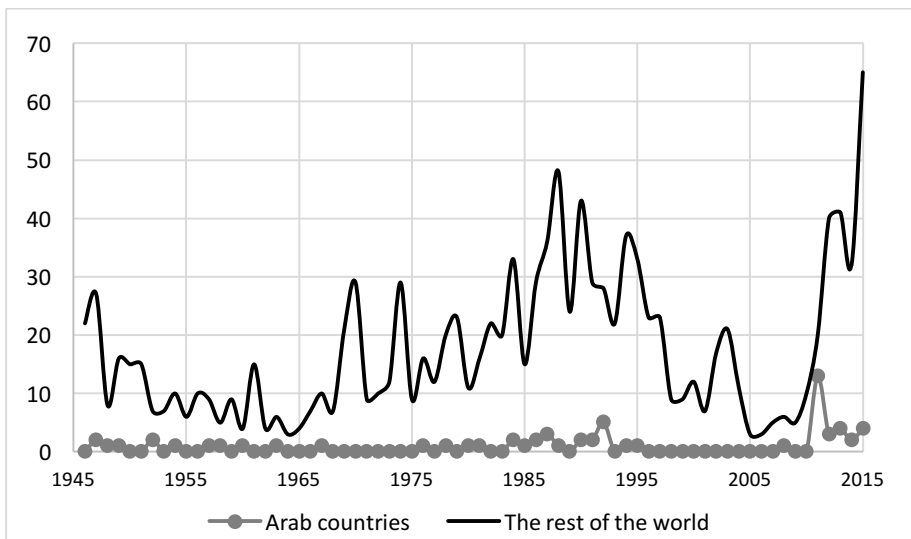


Figure 31. Total number of general strikes recorded in Arab countries and the rest of the world by CNTS, 1946-2015. Source: CNTS Data (Banks and Wilson 2017).

Triggered by the Arab spring, the global wave of socio-political destabilization led after 2010 to a very significant growth of socio-political instability in absolutely all World-System zones. However, this global destabilization wave manifested itself in different World-System zones in different ways and not completely synchronously. In 2011, a particularly strong increase in the number of demonstrations, riots, and strikes was observed in the Arab world and high-income OECD countries (“the West”). On the one hand, in 2011 a significant increase in the number of anti-government demonstrations was also observed in sub-Saharan Africa, Central Asia, Eastern Europe, and the post-Soviet states, whereas a substantial increase in the number of riots was recorded in sub-Saharan Africa, in the countries of Eastern Europe and former USSR, as well as in Asian countries; on the other hand, however, this rise was not as powerful here as in the Arab world and in the countries of the West (see Figures 32–34).

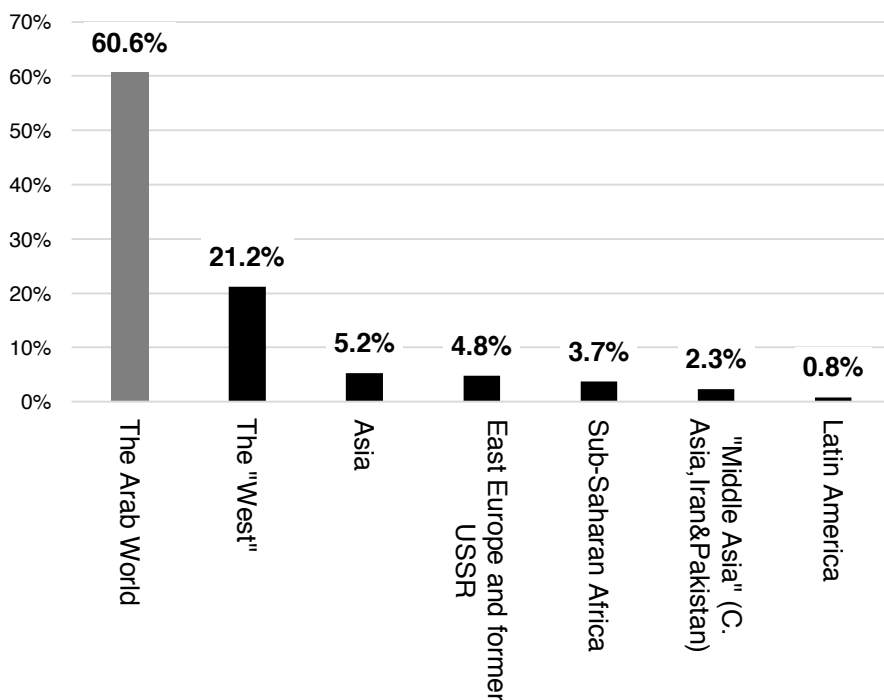


Figure 32. Contribution of various World-System macro zones to the global destabilization of 2011 (anti-government demonstrations). Source: CNTS Data (Banks and Wilson 2017).

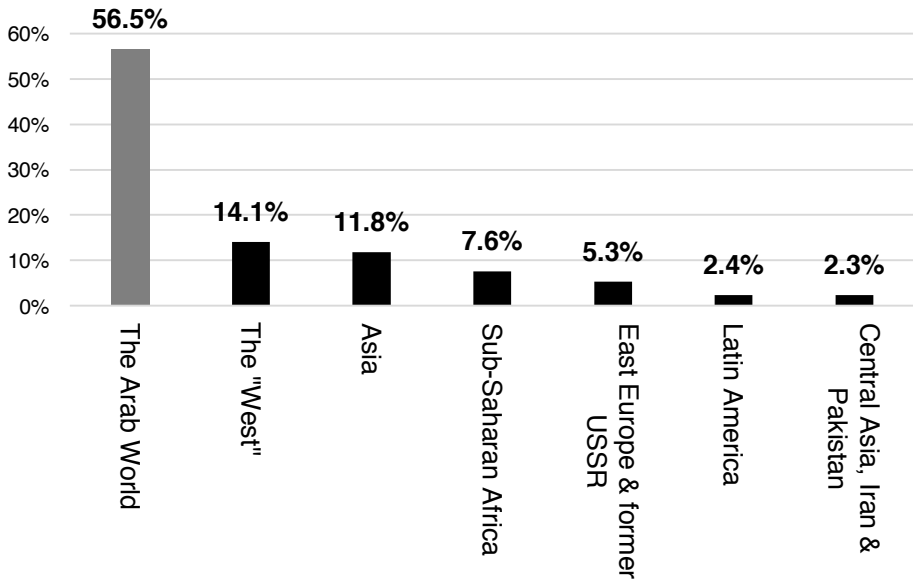


Figure 33. Contribution of various World-System macro zones to the global destabilization of 2011 (riots). Source: CNTS Data (Banks and Wilson 2017).

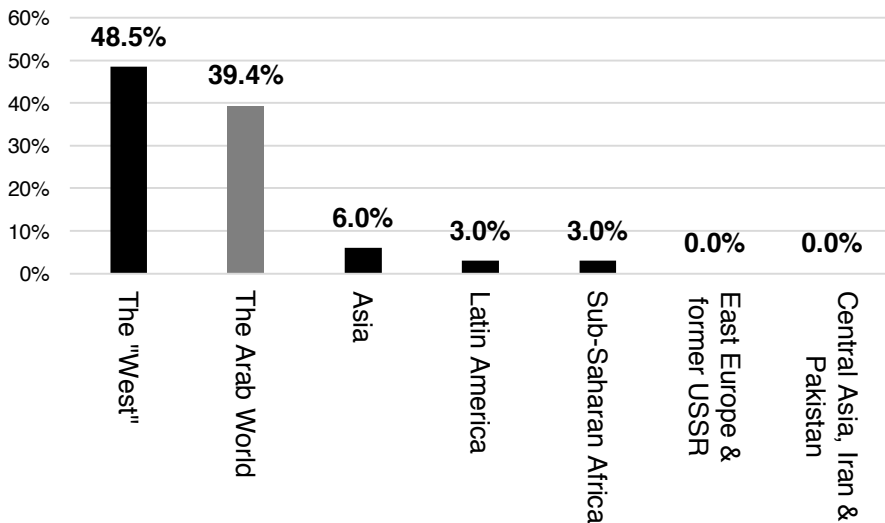


Figure 34. Contribution of various World-System macro zones to the 2011 global destabilization (general strikes). Source: CNTS Data (Banks and Wilson 2017).

We believe that the modeling of social pressures toward political instability in the UK and the USA performed by Peter Turchin and us can throw some light on the factors and patterns of the above-mentioned global sociopolitical destabilization wave of the 2010s. Indeed, our results suggest that by 2011 both the American and British social systems accumulated very large amounts of socially explosive stuff. Hence, it is no surprise that the sparkle of the Arab Spring produced social explosions. Note that our analysis also suggests that this social explosive stuff was accumulated in the UK and the USA largely due to the neoliberal policies pursued there in recent decades. As these policies after the 1980s became popular in the majority of the high-income OECD countries (“the West”), there are grounds to expect that they must have resulted in the accumulation of the socially explosive stuff in these countries as well (cf. Canty 2015), which could explain why the Arab Spring resonated so strongly there. The neoliberal policies finally affected the whole of the World System, but they affected them in different ways (for example, the World-System periphery and semi-periphery was especially affected by the stagflation waves, whose influence on the World System core was not as dramatic (see, e.g., Akaev, Sadovnichy, and Korotayev 2012). However, of course, the influence of the neoliberal policies on the global sociopolitical destabilization needs a further profound investigation.

Conclusion

In conclusion, when applying and comparing Turchin’s analysis to the UK context, the predictive ability of Goldstone’s model seems to be evident. In the context of neoliberal restructuring, we believe this paper and Turchin’s analysis (2013) provides some important evidence in explaining the rise in political instability.

It comes as no surprise that our analysis of the structural conditions leading towards political instability in the UK bears very similar traits to those occurring in the US, which were outlined in great detail by Turchin (2016). The common structural evolution in socioeconomic dynamics between the United States and the United Kingdom can be framed as part of a wider series of problems caused by the destruction of the post war political order in western democracies. In line with Streeck (2011), we argue that “mainstream economics has tended to conceive of society as governed by a general tendency towards equilibrium where crisis and change are no more than temporary deviations from the study state of a normally well integrated system” (Streeck 2011: 5), consequently it has failed to explain the processes observed by Turchin in the US and our UK model, which clearly underline a more permanent cause in the rise of pressures towards sociopolitical instability. Such a prominent manifestation of the rising socio-political instability across identical timeframes, yet within different jurisdictions, warrants a coherent macro explanation that amounts to more than just ‘consilience’ (Kuran 1992). The latter is especially important in regard to

confirming the ability of structural demographic theories “to understand and predict the dynamics of socio-political instability” across various countries (Tuchin 2013).

The root cause of a continuous deterioration in ‘well being’ (Tuchin 2013) across the UK and the US during the same timeframe seems to have its origins in a deeper and more fundamental paradigm shift that occurred during “the political economic (re)configuration of advanced capitalistic societies” (Streeck 2011: 5). Rather eloquently, Streeck (2011) argues that there are inherently irreconcilable conflicts in the post war established social formation he calls ‘democratic capitalism’. Our models and Streeck’s main argument converge towards a deterioration of ‘well being’ from the 1970’s onwards “where the series of crisis ruled by an endemic conflict between capitalist markets and democratic politics forcefully reasserted itself when high economic growth came to an end in the 1970’s” (Streeck 2011: 7). The long term decline of relative wages, the unfavorable economic conjecture facing the elites, and rising state fiscal distress today can all be framed as America and Britain’s answer to the ending post war settlement between labor and capital.

Post war governments that had made extensive use of Keynesian economics through expanding the welfare state, allowing workers to undertake collective bargaining freely and following the political guarantee of full employment, were no longer able to maintain the winning combination of ‘democracy and capitalism’ when economic growth began to falter in the late 1960’s (Streeck 2011). The dire economic consequences in the US and UK were eventually met with the rise of Neoconservative governments, which successfully and simultaneously attacked high inflation during the 1980s. However, far from promoting ‘economic well being’, Streeck argues the attack on inflation contributed to the eradication of a mechanism that allowed the working class to enjoy a higher share of the country’s income. Moreover, Streeck observes “in both the US and UK, disinflation was accompanied by determined attacks on trade unions by governments and employers, epitomized by Reagan’s victory over the Air Traffic Controllers and Thatcher’s breaking of the National Union of Mine Workers” (Streeck 2011: 13).

The Neoconservative agendas in the UK and the US were analogous in that they were both under “pressure to cease accommodating redistributive wage settlements and restore monetary discipline” in order to end inflation (Streeck 2011: 11). These identical policies pursued by respective ‘Neocon’ governments favored creditors and holders of financial assets at the expense of general well being. Along the lines of Streeck, we believe that the decline in economic growth experienced by both the UK and the US in the 1970s set in motion forces that led to the pursuit of simultaneous economic policies under the justification that general “well-being can best be advanced by liberating individual and entrepreneurial freedoms and skills” (Harvey 2005: 2). Naturally, the free market

approach and deregulatory agenda perused by ‘Neocons’ might have stimulated the UK and the US economy and eradicated inflation, but, as discussed before in this paper, it has also resulted in permanently higher inequality levels.

All in all, it is our belief that the Neoconservative approach to economic policy (a bit paradoxically often denoted as “neoliberal” economic policy) undertaken simultaneously in the US and UK under the Thatcher and Reagan leadership has set in motion irreversible forces. Today it is these forces that account for the near identical rise of unfavorable socio-economic characteristics, namely increasing inequality, and for the coinciding rise in socio-political instability across both countries. In the context of the United Kingdom and the United States, the Goldstone—Turchin model does indeed seem to be alive and valuable. On the other hand, as we have seen above, the modeling of social pressures toward political instability in the UK and the USA performed by Peter Turchin and us can throw some light on the factors and patterns of the global sociopolitical destabilization wave of the 2010s. Thus, Goldstone’s demographic structural model might have some predictive potential not only at the national level, but also global scale.

Acknowledgements

This research has been supported by the Russian Foundation for Basic Research (Project # 17-06-00476).

References

- Addison, P. 1975. *The Road to 1945: British Politics and the Second World War*. London: Jonathan Cape.
- Addison, P. 2010. *No Turning Back: The Peacetime Revolutions of Post-War Britain*. Oxford: Oxford University Press.
- Akaev, A., A. Korotayev, L. Issaev, and J. Zinkina. 2017. “Technological development and protest waves: Arab spring as a trigger of the global phase transition?” *Technological Forecasting and Social Change* 116: 316-321. doi: 10.1016/j.techfore.2016.08.009.
- Akaev, A., V. Sadovnichy, and A. Korotayev. 2012. “On the dynamics of the world demographic transition and financial-economic crises forecasts.” *The European Physical Journal Special Topics* 205(1): 355-373. doi: 10.1140/epjst/e2012-01578-2.
- Ann, T. W., Y. Wu, J. Shen, X. Zhang, L. Shen, and L. Shan. 2015. “The key causes of urban-rural conflict in China.” *Habitat International* 49: 65-73. doi: 10.1016/j.habitatint.2015.05.009.
- Anufriev, A.I. and D. G. Zaytsev. 2016. “‘Protest Public’ in Egypt and Turkey from 2011 till Present Days: Assessment of Impact on Political Changes.”

- Comparative Politics (Russia)* 7:34-47. doi:10.18611/2221-3279-2016-7-2(23)-34-47.
- Banks, Arthur S. and Kenneth A. Wilson. 2017. Databanks International: Cross-National Time-Series Data Archive. <http://www.cntsdata.com>. Accessed May 15, 2017.
- Banks, Arthur S. and Kenneth A. Wilson. 2017. Cross-National Time-Series Data Archive. Jerusalem, Israel: Databanks International. <http://www.databanksinternational.com>. Accessed May 24, 2017.
- Bordo, M. D. 2008. "An Historical Perspective on the Crisis of 2007-2008 (No. w14569)." *National Bureau of Economic Research*. doi: 10.3386/w14569.
- Canty, J. M. 2015. "Globalism and Localization in the Context of the Ecological and Social Crisis." *World Futures* 71: 59-64. doi: 10.1080/02604027.2015.1092783.
- Duch, R. M. and R. Stevenson. 2008. *Voting in Context: How Political and Economic Institutions Condition the Economic Vote*. Draft Book Manuscript.
- Easterlin, R. 1980. "Introduction" In *Population and Economic Change in Developing Countries*, edited by Richard A. Easterlin, 1-4. Chicago: University of Chicago Press. doi: 10.7208/chicago/9780226180250.001.0001.
- Esposito, E. 2015. "Ideological incoherence at the core of the capitalist-democratic dynamic." *Journal of Globalization Studies* 6(1): 91-107.
- Fuller, G. E. 2004. *The Youth Crisis in Middle Eastern Society*. Clinton Township, MI: Institute for Social Policy and Understanding.
- Goldstone, J. A. 1991. *Revolution and Rebellion in the Early Modern World*. Berkeley, CA: Univ. of California Press.
- Goldstone, J. A. 2000. "Predicting Revolutions: Why We Could (and Should) have Foreseen the Revolutions of 1989-1991 in the USSR and Eastern Europe." *Contention* 2: 127-152.
- Goldstone, J. A. 2002. "Population and Security: How Demographic Change Can Lead to Violent Conflict." *Journal of International Affairs* 56(1): 3-21.
- Grinin, L., L. Issaev, and A. Korotayev. 2015. *Revolutsii i nestabil'nost' na Blizhnem Vostoke [Revolutions and Instability in the Near East]*. Moscow: Moscow office of 'Uchitel' Publishing House.
- Grinin, L. and A. Korotayev. 2012. "Does 'Arab Spring' Mean the Beginning of World System Reconfiguration?" *World Futures* 68(7): 471-505. doi: 10.1080/02604027.2012.697836.
- Grinin, L. and A. Korotayev. 2016. "MENA Region and the Possible Beginning of World System Reconfiguration" In *Comparative Political and Economic Perspectives on the MENA Region*, edited by M. Mustafa Erdogan and Bryan Christiansen, editors, 28-58. Hershey, PA: Information Science Reference. doi: 10.4018/978-1-4666-9601-3.
- Grinin, L. E. and A.V. Korotayev. 2009. "Urbanization and Political Instability." *Polis. Political Studies* 4: 34-52 (in Russian).

- Grönlund, K. and M. Setälä. 2007. "Political Trust, Satisfaction and Voter Turnout." *Comparative European Politics* 5(4): 400-422. doi: 10.1057/palgrave.cep.6110113.
- Harvey, D. 2005. *A Brief History of Neoliberalism*. London: Oxford University Press.
- Heinsohn, G. 2003. *Söhne und Weltmacht. Terror im Aufstieg und Fall der Nationen*. Zürich: Orell Füssli Verlag.
- IFRS Foundation. 2017. International Financial Reporting Standards Database. <http://www.ifrs.org/IFRS-Research/Pages/IFRS-Research-Centre.aspx>. Accessed April 20, 2017.
- Kesselman, M. 2002. "The Triple Exceptionalism of the French Welfare State." In *Diminishing Welfare: A Cross-National Study of Social Provision*, edited by, G.S. Goldberg and M. G. Rosenthal, 181-210. Westport, CT: Greenwood Publishing Group.
- Kong, D. T. 2014. "Perceived Competence and Benevolence of Political Institutions as Culturally Universal Facilitators of Political Trust." *Cross-Cultural Research* 48(4): 385-399. doi: 10.1177/1069397114523929.
- Korotayev, A., L.M. Issaev, S.Y. Malkov, and A.R. Shishkina. 2013. "Developing the Methods of Estimation and Forecasting the Arab Spring." *Central European Journal of International and Security Studies* 7(4): 28-58.
- Korotayev, A. and N.A. Komarova. 2004. "New Mathematical Model of Pre-Industrial Demographic Cycle." In *Mathematical Modeling of Social and Economic Dynamics*, edited by M.G. Dmitriev and A.P. Petrov, 157-163. Moscow: Russian State Social University.
- Korotayev, A., A. Malkov, and D. Khaltourina. 2006. *Introduction to Social Macrodynamics: Secular Cycles and Millennial Trends*. Moscow: KomKniga/URSS.
- Korotayev, A.V., A.R. Shishkina and L.M. Issaev. 2016. "Arab Spring as a Trigger of the Global Phase Transition?" *Polis. Political Studies* 3: 108-122 (in Russian).
- Korotayev, A. and J. Zinkina. 2011a. "Egyptian Revolution: A Demographic Structural Analysis." *Entelequia. Revista Interdisciplinar* 13: 139-169.
- Korotayev, A. and J. Zinkina. 2011b. "Egyptian Revolution of 2011." *Middle East Studies Online Journal* 2(5): 57-95.
- Kuran, T. 1992. "Review of Jack A. Goldstone, *Revolution and Rebellion in the Early Modern World* (Berkeley: University of California Press, 1991)." *Contemporary Sociology* 21:8-10.
- Kuran, T. 1995. "The Inevitability of Future Revolutionary Surprises." *American Journal of Sociology* 100(6): 1528-1551. doi: 10.1086/230671.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny. 2001. "Law and Finance." In *Corporate Governance*, 26-68. Berlin: Springer. doi: 10.1007/978-3-642-59499-1_3.

- Lewis-Beck, M. S., and M. Paldam. 2000. "Economic voting: an introduction." *Electoral Studies* 19(2): 113-121. doi: 10.1016/s0261-3794(99)00042-6.
- Macunovich, D. J. 2002. "Using Economics to Explain US Fertility Trends." *Population Bulletin* 57(4): 8-9.
- MeasuringWorth. 2017. The "Official" Series Database. <http://www.measuringworth.com/ukgdp>. Accessed May 9, 2017.
- Mesquida, C. G., Weiner N. I. 1999. "Male Age Composition and Severity of Conflicts." *Politics and the Life Sciences* 18: 113-117. doi: 10.1017/s0730938400021158.
- Moller, H. 1968. "Youth as a Force in the Modern World." *Comparative Studies in Society and History* 10: 238-260. doi: 10.1017/s0010417500004898.
- Nefedov, S. A. 2015. "Debate on the Population Well-Being and the Russian Revolution." *Social Evolution & History* 14(1): 116-124.
- National Archives. 2017. National Archives Immigration Statistics Database and Unemployment Statistics Database. <http://www.nationalarchives.gov.uk>. Accessed May 12, 2017.
- OECD. 2017. Labour Force Statistics Database. <http://www.oecd.org/std/labour-stats>. Accessed May 8, 2017.
- Office for National Statistics. 2017. ONS Inflation Indices/Employment Statistics database and ONS Labour Force Survey. <https://www.ons.gov.uk>. Accessed May 12, 2017.
- Ogien, A. and A. Borisenkova. 2014. "Ulichnaya politika i politika golosovaniya." *Russian Sociological Review* 13(1): 38-51.
- Sadovaya, Ye. S. 2016. "Sotsial'no-ekonomicheskiye faktory etnopoliticheskoy konfliktnosti." *Polis. Politicheskkiye issledovaniya* 4:41-53.
- Streck, W. 2011. "The Crises of Democratic Capitalism." *New Left Review* (71): 5-29.
- Turchin, P. 2003. *Historical Dynamics: Why States Rise and Fall*. Princeton, NJ: Princeton University Press.
- Turchin, P. 2005. *War and Peace and War: Life Cycles of Imperial Nations*. New York: Pi Press.
- Turchin, P. 2013. "Modeling Social Pressures Toward Political Instability." *Cliodynamics: The Journal of Theoretical and Mathematical History*: 4(2): 241-280.
- Turchin, P. 2016. *Ages of Discord: A Structural-Demographic Analysis of American History*. Chaplin, CT: Beresta Books.
- Turchin, P. and A. Korotayev. 2006. "Population Density and Warfare: A Reconsideration." *Social Evolution & History* 5(2): 121-158.
- UN Population Division. 2017. "World Population Prospects." United Nations Department of Economic and Social Affairs Population Division Database. <http://www.un.org/esa/population>. Accessed April 25, 2017.

- Van der Brug, W., C. Van der Eijk, and M. Franklin. 2007. *The Economy and the Vote: Economic Conditions and Elections in Fifteen Countries*. Cambridge: Cambridge University Press.
- Wilson, D., and C. Game. 2011. *Local Government in the United Kingdom*. London: Palgrave Macmillan. doi: 10.1007/978-0-230-35667-2.
- Wilson K. 2017. "User's Manual. Cross-National Time-Series Data Archive." Jerusalem: Databanks International.
- World Bank. 2017. World Bank Employment Datasets. <http://data.worldbank.org/country/united-kingdom>. Accessed May 15, 2017.

Appendix

Cross National Time Series (CNTS)

The Cross-National Time Series (CNTS) database is a result of data compilation and systematization started by Arthur Banks (Banks and Wilson 2017) in 1968 at the State University of New York, Binghamton. The work was based on generalizing the archive of data from *The Statesman's Yearbooks*, published since 1864. It also contains approximately 200 indicators for more than 200 countries. The database contains yearly values of indicators starting from 1815 excluding the periods of World Wars I and II (1914–1918 and 1939–1945).

The CNTS database is structured by sections, such as territory and population, technology, economic and electoral data, internal conflicts, energy use, industry, military expenditures, international trade, urbanization, education, employment, legislative activity, etc.

In our paper, we take a close look at the data describing internal conflicts (*domestic*). This section includes data starting from 1919 based on the analysis of events in 8 various subcategories, which are used to compile an **Integral Index of Sociopolitical Destabilization** (domestic9). When calculating the Integral Index, the developers of CNTS database give each category a certain weight (see Table A1).

Table A1. Weights of subcategories used in calculating the Integral Index of Sociopolitical Destabilization

Subcategory	Variable name	Weight within Index of Sociopolitical Destabilization (domestic9)
Assassinations	domestic1	25
General Strikes	domestic2	20
Guerrilla Warfare	domestic3	100
Government Crises	domestic4	20
Purges	domestic5	20

Riots	domestic6	25
Revolutions ¹	domestic7	150
Anti-Government Demonstrations	domestic8	10

To calculate the Integral Index of Sociopolitical Destabilization (Weighted Conflict Measure, domestic9) the numerical values of each subcategory are multiplied by their corresponding weights, the results of the multiplications are summed up, then the sum is multiplied by 100 and divided by 8—see formula (2):

$$\text{domestic9} = \frac{25 \text{ domestic1} + 20 \text{ domestic2} + 100 \text{ domestic3} + 20 \text{ domestic4} + 20 \text{ domestic5} + 25 \text{ domestic6} + 150 \text{ domestic7} + 10 \text{ domestic8}}{8} * 100 \quad (\text{A1})$$

¹ One should keep in mind that the name of this variable given by the CNTS developers (“Revolutions” [see, for example: Wilson 2017: 13]) misleads the user to a very significant degree, since in reality it describes in most cases not revolutions in the academic sense (for our summary of the definitions of the revolution see, for example, Grinin, Isaev, and Korotaev 2015), but rather coups and coups attempts.