

 THE EQUALITY TRUST



COURSE CORRECTION

THE PRE-DISTRIBUTIVE CASE FOR THE 50P TOP INCOME TAX RATE

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EXECUTIVE SUMMARY

Tax is an ever-present aspect of our daily lives. But, amid the increasing concern over fairness and equality, and over economic growth and prosperity, one area of tax stands out as particularly prominent: income tax paid by the wealthiest in society, or the 'top rate' of tax.

This report explores **the relationship between top personal income tax rates, economic growth, and economic inequality**. It does so via an exploration of the empirical, historical and international evidence on this topic. It aims to identify whether, and how, top income tax rates are related to economic inequality, how high-income tax rates affect economic growth and the extent to which tax policy is effective in decreasing economic inequality.

Chapter one shows how **a cut in the top income tax rate is associated with an increase in economic inequality through a pre-tax increase in the income share of the top 1%**. This is in addition to the more obvious effect on post-tax inequality. Through new Equality Trust polling, it also reveals that **a majority of voters, for all three of the UK's main political parties, support the top 1% paying a higher proportion of their income in tax**.

Chapter two concludes that there is little or no **relationship between tax rates and economic growth**. There is only a proven relationship in the case of very high taxes of above 80%. Its conclusion challenges the consensus in many political and economic circles that increasing the top income tax rate would harm the economy.

Chapter three looks at key theories espoused by traditional economic models of taxation, and concludes that **there may be no link between tax rates and the amount worked by high-income individuals**. This contradicts those who argue that as income tax rates increase, those affected will work fewer hours, and challenges the assumption that increases in income tax will be accompanied by falling productivity and hours worked.

However, chapter three also finds that **very high rates of taxation (approximately 80%) could reduce incoming migration of high-income individuals and increase outgoing migration** of the same group.

Chapter four finds that higher **taxation may reduce the incentive for high-income individuals to bargain for higher salaries than is warranted by the productivity they provide** for their employers.

Chapter five concludes that the **pay of senior managers increases just as fast due to factors outside their control as to those within their control, and yet it does not fall at the same rate due to those outside factors.** This suggests that as high pay has risen, executives receive more of the benefits of growing companies than can be attributed to the value they bring to their organisations.

Taken as a whole, the evidence provides **a compelling case that a higher top rate of income tax could reduce high pay and in doing so deliver wider economic and social benefits.**

The report **recommends that the top rate of income tax should be raised to 50%,** primarily for its pre-distributive effects for our economy rather than the extra revenue it may raise.

INTRODUCTION: INEQUALITY AND TAX IN THE UK

Inequality has increased dramatically in most OECD countries over the last three decades and particularly in the UK. Between 1979 and 2009/10, the top 10% boosted its share of total income in the UK by 10% from 21% to 31%, while the share received by the bottom 10% fell from 4% to 1%¹. The share of the top 1% has increased at an even more rapid rate, rising from 5.7% in 1978 to 13% in 2011².

High and rising levels of inequality are of great social, economic and political consequence. Extensive research suggests that increased income inequality is associated with a wide range of negative effects. It damages a society's health, reduces social mobility and increases debt and financial volatility³. Reflecting this, and itself a sign of growing public unease, inequality is moving to the forefront of the political debate in the UK and many OECD countries. Global figures from Barack Obama to the Pope have expressed concern at rising inequality, while in the UK voices within all political parties have recognised its pernicious effects.

Tax is an important tool in reducing the worst excesses of rising market inequality⁴ and as such has been a key component of recent policy debates. Research by The Equality Trust shows that the UK's current tax system is both misunderstood and deeply unpopular: people perceive the tax system to be progressive, would like it to be more progressive than they think it is, and are unaware that it is actually broadly regressive. Contrary to public preference, the UK tax system currently takes a greater proportion of income from poorer households than it does from richer households⁵.

This report will attempt to give clarity to this confusion by providing a more comprehensive account of income tax, and its relation to economic growth and inequality. It draws together the economic evidence and literature on the income share of the top 1%, the top marginal income tax rate and economic growth, in order to broaden the conversation beyond the simple behavioural effects and economic consequences of tax, and refocus the tax debate on the effects of tax on economic inequality.

1 1938/9 and 1972/3: Royal Commission in Income and Wealth; 1979; 1990/1 JRF 1995; 1996/7 onwards HBAI

2 Alvarado F, Atkinson AB, Piketty T and Saez E, The World Top Incomes Database, Paris, 2014

3 <http://www.equalitytrust.org.uk/about-inequality>

4 OECD 2014

5 Tax distribution report I

THE RISE OF THE 1 PER CENT

Inequality today can no longer be seen as just a question of income distribution between the rich and the rest. Even within the group of top-income earners, incomes over the past three decades have become more concentrated, tilting towards the richest of the rich. In the United States, the share of the top 0.1% grew from 2% to over 8% of total pre-tax incomes from 1980 to 2010 while in the UK the top 0.1% now account for roughly 4-5% of pre-tax total income⁶.

Despite the continued focus on the Gini (the Gini coefficient is more sensitive to changes at the middle than at the ends of the distribution⁷) as a measurement of inequality, there is increasing interest in those at the very top. Thomas Piketty has played a pivotal role in this. Along with Emmanuel Saez and Anthony Atkinson, he has pioneered a revolution in our understanding of long-term trends in inequality, culminating in the publication of *Capital in the 21st Century*⁸.

Before their work, even those willing to discuss inequality tended to focus on the gap between the poor and the well off. There was less focus on the very rich or the rapidly rising incomes of executives and bankers⁹. Piketty and colleagues' data showing the spiralling incomes of the top 1% has prompted a shift in the conversation: we are now aware that the gap between the richest and the rest is actually the big story in rising inequality. Awareness of this inequality has now spread beyond the usual suspects. Recent OECD commentary on the income share of the top 1% shows that concern with runaway top incomes and inequality is neither ideologically bound nor restricted to academic circles.

TAX AND INEQUALITY

Tax is vital to reducing market inequality and yet changes to the top marginal income tax rates since the 1970s have arguably had the opposite effect. The substantial reduction in top rates of personal income tax that occurred in almost all OECD countries over the last three decades has occurred at the same time as a rising income share for the top 1%¹⁰. The decline in top rates of income tax leads to a reduction in the tax burden carried by high earners and thus increases their pre-tax income.

The recent financial crisis has done little to change these trends in the UK and, unlike some of its European neighbours (Portugal, France and Italy) who increased their top personal income tax rate post 2009, the UK reduced its top personal income tax rate from 50% to 45% in 2013. It is in light of the strong correlation between decreases in the top marginal income tax

6 OECD 2014

7 OECD 2014

8 Piketty 2014

9 Krugman 2014

10 OECD 2014

rate and increases in the income share of the top 1%¹¹ that we argue that a higher top income tax rate has a central part to play if we are to prevent the inequality trends of the past 30 years from worsening.

11 World Top Income Database for top 1% pre - tax income share, OECD CTPA tax statistics for income tax rates

1. THE LINK BETWEEN TOP INCOME TAX RATES AND INEQUALITY

Discussions of taxation have, for the most part, focused on the revenue raising effects of personal income tax¹² and the costs it imposes on people at different points on the income spectrum¹³. So far, there has been insufficient discussion of the potential behavioural responses to tax and the associated wider economic consequences of tax rates. Worse still, little has been said of the possible link between top income tax rates and high levels of economic inequality.

This chapter looks specifically at this latter issue through the available evidence on the top personal income tax rate and the pre-tax income share of the top 1%. In doing so it aims to shed light on the relationship between the top personal income tax rate and inequality.

TOP TAX AND TOP INCOMES

Empirical and historical evidence suggests that there is a clear link between the top income tax rate and the income share of the top 1%. Between 1970 and 1990 both the US and UK lowered their top rates of tax from levels exceeding 80% to rates below 40%. During this period both countries saw a dramatic increase in the income share of the top 1%¹⁴. In the case of the UK, from 1978 to 2003, the income share of the top 1% doubled from 6% to 12.6%; a rise which, according to the Institute for Fiscal Studies, is partly attributable to decreases in the top income tax rate¹⁵.

INTERNATIONAL COMPARISONS

This link, between the top income tax rate and top income share, is also supported by international evidence. In the US, the Congressional Research Service has found a strong association between a reduction in the top income tax rate and an increase in the income share of the top 0.1%¹⁶. Meanwhile, among those countries which have not lowered their top income tax rates over time the income share of the top 1% has increased at a slower rate. Reflecting this, cross-national analysis of 18 OECD countries has found a strong correlation between the top income tax rate

12 <http://www.itv.com/news/update/2014-01-27/ifs-50p-tax-will-raise-little-revenue-for-uk-economy/>

13 <http://centreforum.org/index.php/14-news/releases/581-taxing-poverty-is-wrong-media-release>

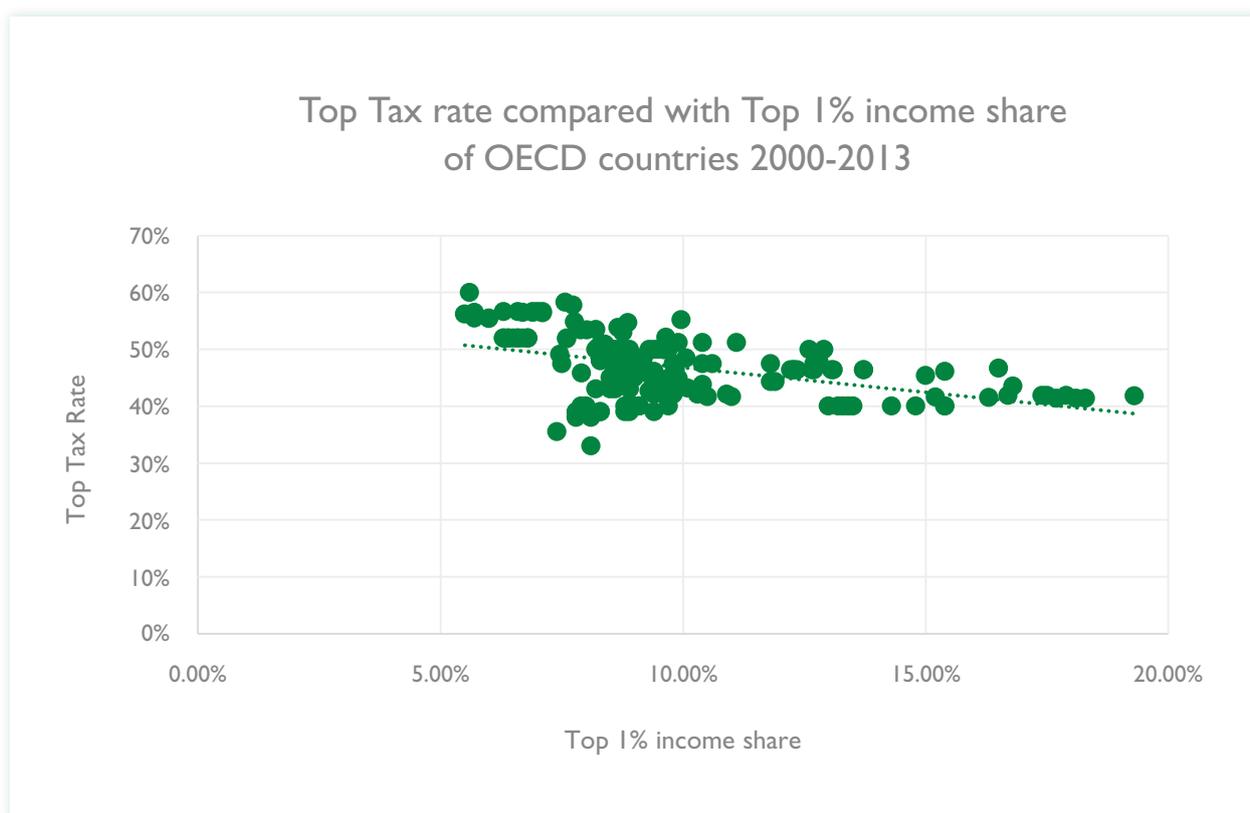
14 Piketty 2014

15 Brewer et al 2008

16 Congressional Research Service

and the pre-tax income share of the top 1%. This correlation was so strong that no country saw a significant increase in the top income share without a substantial top rate tax cut¹⁷.

The graph below shows a series of countries comparing their top personal income tax rate and top pre-tax income share. As can be seen from the graph, countries with a lower top 1% income share have top income tax rates which are close to 50%¹⁸.



The relationship between top income shares and top income tax rates however is not straightforward. Although top income shares have increased in English speaking countries, and to a lesser extent in Nordic countries and southern Europe, increases in continental Europe and Japan have been comparatively smaller.

While this mostly aligns with countries' respective tax policies¹⁹, there is some evidence of cross-national effects of top income tax rates and top income shares. The income share of the top 1% in Canada, for instance, is more associated with the income share of the top 1% in the USA²⁰ than with their own more progressive tax policy. Similarly, while New Zealand's higher

17 Piketty, Saez, Stantcheva 2011

18 Top Income data: Chartbook of Economic Inequality Top income tax rate data: OECD Top marginal combined personal income tax rates

19 Atkinson, Piketty and Saez

20 Atkinson, Piketty and Saez

marginal tax rates have had a negative effect on the income share of their top 1%, the latter is more strongly associated with the income share of the top 1% of Australia and the UK²¹. The possible reasons for this are addressed in subsequent chapters.

OTHER FACTORS BEHIND TOP 1% INCOME SHARE

Evidence suggests that top income shares are influenced by multiple factors beyond the top tax rate. As a result, some countries have cut their top income tax rates without seeing the top income share increase to the same extent as elsewhere²². This is exemplified by Japan where institutions and rules, such as high union membership, the tendency of employees to remain with one company for the entirety of their career, and the rarity of poaching of highly paid staff²³ have suppressed high pay which could, in other circumstances, have been achieved through taxation.

Until 1997, it was illegal in Japan to compensate executives with stock options, reducing high pay²⁴. Since rewards via stock options became legal, the top 1% income share has increased²⁵. China has seen a similar phenomenon. Rewarding executives with stock options was illegal in China until 2006. Since legislation in 2006, there has been a rise in the income share of the top 1%²⁶.

TAX AND INCOME SHIFTING

Some research has disputed this direct link between top incomes and tax rates, however this research is open to question. Goolsbee found that income tax rates caused a temporary shifting of pay, whereby an individual shifts a portion of their taxable income to another person or tax year, but found no effects of tax on high-incomes at the end of four years²⁷. Although such time shifting of income has been considered by some to be the main effects of tax changes, multiple other studies have emphasised the need to address the long-term effects of tax changes on income distribution and, importantly, it is in these long-term changes that the largest effects have been seen²⁸.

WHAT DOES INCOME SHIFTING MEAN FOR THE UK?

21 Atkinson, Leigh 2008

22 Piketty, Saez, Stantcheva 2011

23 Moriguchi, Saez 2008

24 (Bajka and Heim, 2009)

25 Atkinson, Piketty and Saez

26 Bryson, Forther and Zhou 2014

27 Goolsbee 2000

28 Piketty 2014

The issue of income shifting is particularly important in relation to the UK debate on top income tax rates. The UK's brief experience is worth some consideration here. And so the UK's brief recent experience of a 50p top income tax rate was affected strongly by income shifting, meaning that any behavioural changes resulting from the tax change could not be disentangled from income shifting. This result also has important implications for those who view any tax rate changes as a temporary measure to gain revenue, as both George Osborne and Alistair Darling did regarding the 50p rate before the last general election²⁹. In particular, it is worth noting that the revenue from short term tax changes will be affected by income shifting and will not have time to produce behavioural responses or establish their long term revenue raising ability.

The long-term effects of a 50p tax rate are as yet unknown and according to the IFS "there remains a great deal of uncertainty over the revenue-maximising top income tax rate"³⁰. One of the best estimates of where the optimal tax rate lies was developed as part of the Mirrlees review³¹, which suggested a top income tax rate between 50.4% and 64.5%³². This tax rate includes all sources of taxation and so would be consistent with a top income tax rate between 40% and 50%. However, this is based upon a model of incomes which assumes that the main labour response to taxation is changes in labour effort and a reduction or increase in work hours. As we will explore in chapters three, four and five, there are other labour responses to tax rates which are important in determining an optimal tax rate, most importantly the bargaining response.

WHAT DOES THE PUBLIC THINK ABOUT THE UK'S CURRENT TAX SYSTEM?

Regardless of whether the top marginal tax rate in the UK is at the optimal level from a purely economic perspective, polling by Ipsos MORI for The Equality Trust shows that the current UK tax system is deeply unpopular and misunderstood. The public support lower taxes on those on lower incomes but at the same time grossly underestimate the amount of tax levied on those on low incomes. They also support higher taxes on higher incomes: 44% of people believe that the top 1% should pay more taxes than the amount they believe the 1% pay and only 20% believe the top 1% should pay less tax than the amount they believe the 1% pay. Surprisingly, public opinion does not divide along political party lines: a majority of Conservative, Labour and Liberal Democrat voters each support the top 1% paying 50% of their income in tax³³. And separate polling by YouGov found 61% of the total population support an increase of the top rate of tax to 50p while only 28% oppose³⁴.

29 House of Commons Library

30 IFS 2012

31 Brewer et al 2008

32 Based on one degree of standard deviation

33 Numbers from polling done for The Equality Trust by Ipsos Mori April 2014

34 Yougov, 28th Jan 2014

Contrary to the public preferences outlined above, the UK system currently takes a greater proportion of income from poorer households than it does from richer households. As outlined in The Equality Trust's previous research *Unfair and Unclear: the effects and perceptions of the UK tax system*³⁵, for every year since records began in 1977, the 10% with the largest income have paid a smaller proportion of their income in tax than either the average household or the poorest 10% of households. Whilst this does not show the proportion of tax paid by the top 1%, it suggests that the public support increasing tax rates on top earners but also that this may be required for the tax system to reflect the UK public's clear preference for a progressive tax system.

CONCLUSION

The evidence outlined in this chapter shows that, contrary to much of the political and economic consensus, and to beliefs held by many members of the public, our current tax system exacerbates inequality by contributing to the growing income share of the top 1%. It is not only unfair, it is also unpopular. This tax system could only be justified if changing it would damage our economy, but as the following chapters show, this is not the case: the evidence suggests that increasing taxes on top incomes does not harm economic growth.

35 Who loses: Tax in the UK: who pays what and what do people think about it?

2. TAX RATES AND ECONOMIC GROWTH: WHAT HAPPENS IF YOU FOLLOW THE EVIDENCE?

An oversimplified form of economics, but one with enduring credibility in political conversations, suggests that cutting taxes increases economic growth. The truth is a little more complicated.

REDISTRIBUTIVE TAX AND GROWTH

Cross-national studies comparing levels of redistribution and growth have found that although there is a link between the level of redistribution and increasing or decreasing growth, this link is weak³⁶.

Recent research from the International Monetary Fund (IMF) has extended this analysis to suggest that redistribution by itself has a neutral effect on economic growth. Moreover, because it reduces inequality, which is harmful for growth, redistribution can be seen as a net positive up to a certain level³⁷.

TAX CUTS AND GROWTH

Despite this, the perception that cutting taxes is wholly positive for economic growth widely persists. However, research looking more specifically at top income tax rates also clearly suggests that there is no relationship between top income tax rates and growth. Both longitudinal and cross-national research on tax rates and growth have failed to find a relationship. The Congressional Research Service's review of the evidence linking tax rates and growth, for example, found that cuts in tax rates did not spur economic growth³⁸ in the US.

Conventional theory would suggest that cutting tax rates would incentivise people to work longer hours which would help the economy grow. The review of the evidence, however, found the opposite: hours worked fell across the world as marginal tax rates dropped. The only relationship between tax and growth found in the review was that when there were lower tax rates, there were lower levels of growth, but there was no evidence to suggest that this was a causal relationship³⁹. Longitudinal analysis of the relationship also disputes the link.

36 Thewissen 2012

37 Ostry, Berg, Tsangarides 2014

38 Congressional Research Service 2014

39 Congressional Research Service 2014

AN HISTORICAL PERSPECTIVE

A Congressional Research Service longitudinal study of US top income tax rates and economic growth since 1945 found no relationship between the top income tax rate and growth and no relationship between indicators of growth such as investment. Productivity, usually seen as a driver of growth, was found to be higher with higher top income tax rates; however this result was statistically insignificant⁴⁰. Conventional economics would suggest that productivity would be strongly linked to tax cuts but evidence suggests there is no such link⁴¹. Piketty's cross national study of 18 OECD countries also failed to find any link between top income tax rates and growth⁴².

The findings from the empirical evidence of no relationship between top income tax rates and growth, are further supported by historical developments. Despite some arguing that high tax rates retarded growth in the 1970s in the US and UK, when viewed in a historical perspective it is evident that lower UK and US growth rates, relative to other countries, was not due to tax rates. The lower growth rates were mainly attributable to other countries recovering growth lost in the years following the war. However, the UK and US had suffered less economically than most of Europe had by the 1970s, and so had already experienced this dramatic economic recovery⁴³.

A NON-LINEAR RELATIONSHIP

Attempts at constructing models to support the conventional view of decreasing tax rates increasing growth are not robust⁴⁴. Whilst there are doubts about a linear relationship there may be a nonlinear relationship between tax rates and growth. This is well exemplified by the experience of China, between 1949 and 1979, and India, between 1947 and 1984, where extreme taxation impacted growth. This contrasts to smaller changes which may not affect growth. Research using this non-linear model suggests that changing top marginal tax rates from 70% to 85% would have the same effect as increasing top rates from 35% to 70%, indicating large negative effects from tax rates over 75%⁴⁵.

INTERNATIONAL COMPARISONS

The link between high top rates of income tax and low economic growth is further disputed by cross-national-longitudinal research covering 17 OECD countries between 1961 and 1994⁴⁶. Despite sizable changes to US and UK tax codes in this period, the study found no

40 Congressional Research Service 2012

41 Piketty 2014

42 Piketty, Saez, Stantcheva 2011

43 Piketty 2014

44 Tanzi, Zee 1997; Jaimovich, Rebelo 2012

45 Jaimovich, Rebelo 2012

46 Landon-Lane, Robertson 2002

relationship between higher taxes and growth rates. This casts even greater doubt on models predicting growth from lower tax rates. This and other findings lead Manski to conclude that model specification explains all empirical findings on the link between tax rates and growth and that we actually do not know how labour supply responds to tax rates⁴⁷. This may, however, be too pessimistic a conclusion; microeconomic evidence provides a slightly clearer picture, as shown in the following two chapters.

CONCLUSION

The evidence outlined in this chapter suggests that any relationship which exists between tax rates and growth is not the straightforward negative correlation of low taxes and high growth usually cited. An important conclusion from the literature is that, despite the consensus in many political and economic circles, it does not appear to be the case that raising the top income tax rate would damage economic growth. Indeed, as the following chapters will show, the empirical evidence suggests that increasing top income tax rates may, contrary to expectations, have positive economic effects.

47 Manski 2012

3. HOW DOES HIGHER TAXATION CHANGE BEHAVIOUR?

The limited discussion of the behavioural effects of tax has tended to focus either on avoidance or on specific taxes designed to reduce harmful behaviour, such as smoking or fossil fuel usage, and it concentrates mainly on behaviour at the middle and bottom of the income distribution. So far, discussions of income taxes have not taken advantage of the rich empirical literature that has emerged recently on the ability of taxation to help shape an economy. In particular, little attention has been paid to the effect of the top rate of taxation on the pre-tax income share of those with the largest incomes, the top 1%.

This hasn't stopped an argument developing in political circles that higher taxation affects people's behaviour in ways that produce negative consequences. In particular, it is argued that a higher top income tax rate reduces economic growth through a number of these behavioural changes.

However, while the evidence indicates that there is a strong relationship between the income share of the top 1% and the top income tax rate; there is little relationship between economic growth and tax rates, as set out in chapters two and three of this report. These findings suggest that there is either a very weak relationship between the income share of the top 1% and growth or no relationship at all.

Atkinson and Leigh, for instance, found no relationship between top 1% income share and growth⁴⁸, yet Roine et al suggest that there is a strong positive correlation between GDP per capita growth and top income share. Roine et al do argue, however, that periods of growth increase top income share, not the other way round⁴⁹.

If top income shares are increasing whilst not increasing economic growth, then it suggests a flaw in the dominant economic consensus amongst political pundits. One way to examine exactly whether such a flaw exists, and if so why it does, is to look at the possible behavioural responses to taxation among high earners. This chapter explores these behavioural responses.

THE LABOUR-LEISURE TRADE-OFF – DOES HIGHER TAXATION REDUCE EFFORT?

The most prominent behavioural response to taxation in economic models is the labour-leisure trade-off. According to this theory, higher taxation reduces the rewards gained from work and therefore people choose to work fewer hours when tax is higher because their leisure is worth

48 Atkinson and Leigh 2008

49 Roine, Jesper, Vlachos, Waldenstorm 2009

more to them. This implies that higher taxation may lead to lower overall output.

There is, however, some evidence to suggest that this does not apply to people on high-incomes. Moffitt and Wilhelm's analysis of high-income men in the US between 1983-1989, and top income tax rate reductions that occurred in 1986, found that the tax change had no effect on hours worked. The authors suggest that this was because the men were working such long hours at the beginning of the period, prior to the tax rate reduction, that despite potential income gain following the tax rate decrease, it was very difficult to increase the number of hours worked⁵⁰.

This casts doubt on the explanatory power of the labour-leisure trade-off in discussions of top incomes and marginal tax rates. If the labour-leisure trade-off is not the primary behavioural response to taxes on high-incomes then it would be expected that traditional tax models do not apply in this case and that there may be different behavioural responses to increased taxation.

THE MIGRATION EFFECT – DOES HIGHER TAXATION DRIVE AWAY HIGH EARNERS?

Another concern regarding the behavioural effects of taxation is that of migration, in particular the possible migration of high-income earners as a result of a high or increased top income tax rate. This includes the concern that the possible migration of such workers may, for example, reduce the optimal tax take.

Research suggests that a more progressive tax system is associated with a higher rate of skilled migration, particularly if this tax is charged to employees directly rather than to employers⁵¹. This is well evidenced by Kleven, Landais and Saez's study of the migration of footballers in response to tax changes. The authors found that tax cuts led to increased migration of skilled footballers into a country and that tax increases were associated with a decrease in inward migration. The study formulated optimal tax rates for the UK based upon these flows of migration, calculating that the optimal top income tax rate for footballers born in the UK was 80% and that it was 43% on foreign migrant footballers⁵². Whilst this study is informative, it should be acknowledged that footballers constitute a very small proportion of the top 1% of incomes in the UK and that they are more mobile than other similarly high-income professionals. For example one in every three premiership footballers are English⁵³ compared to 84% of FTSE 250 CEOs⁵⁴. One should therefore be very cautious of applying these findings to the top 1% as a whole.

50 Moffitt and Wilhelm 2000

51 Egger, Radulescu

52 Kleven, Landais, Saez 2010

53 <http://www.bbc.co.uk/sport/0/football/24467371>

54 Work Foundation, 2003

Nevertheless, historically there is some evidence to suggest immigration was a response to tax changes in the UK. Following cuts to the top rate of tax in the UK from 1979, the percentage of migrants in top income groups increased at a faster rate than migrants in the middle or upper part of the income distribution⁵⁵. However, some caution should be exercised when interpreting these findings. This result may not necessarily be attributable to high-income individuals from other countries moving to the UK but could be due to migrants in the UK growing businesses within the UK. Indeed, migrants currently play a large role in UK job creation with 14% of SME job creation coming from migrant-formed companies⁵⁶.

Countries in Europe with higher tax levels than the UK have also seen high-income tax payers leaving at a fast rate. Three thousand and four hundred income taxpayers have left France each year since 2000, Germany lost 145,000 income taxpayers in 2005 alone. Additionally workers with higher skills are more likely to migrate than those with lower skill levels, which suggests that those on higher incomes may be more likely to migrate⁵⁷.

Whilst this evidence suggests that migration is an important behavioural response, it is based upon the relative difference between different countries' tax rates⁵⁸. Tax rates in individual European countries would therefore need to be discussed in the context of other European countries. As discussed in chapter two, most economically similar European countries have tax rates that are closer to 50% than to the UK's current top income tax rate of 45%. Whilst Piketty and others have advocated an 80% or higher income tax for the US, this would not be suitable for the UK. One reason for this is that the US taxes income on the basis of citizenship instead of residency and, as a consequence, is less vulnerable to tax being reduced by migration⁵⁹.

Another problem for the suggestion of an 80% top income tax rate is that Piketty assumes a tax system that has entirely eliminated tax avoidance. Piketty's assertion that tax avoidance cannot be controlled by the income tax system, and would need to be addressed through other legislation, is valid⁶⁰. If a country were to design a tax code where there was no tax avoidance, then income tax would have no effect on avoidance. However, tax avoidance is currently a problem for the UK tax system and if it were the case that a higher rate of tax did increase avoidance then raising the rate to such high levels would only increase it further⁶¹.

TAXATION AND THE BARGAINING RESPONSE

The theories of behavioural change so far discussed have generally predicted negative economic consequences for increasing taxation, particularly at the top end. But other models point

55 Saez, Slemrod, Giertz 2009

56 Centre for Entrepreneurs 2014

57 Simula and Trannoy

58 Bucovetsky

59 Worstall 2012

60 Piketty, Saez, Stantcheva 2011

61 Sumner 2011

towards more positive outcomes. One of the most important and highly discussed behavioural responses to taxation of high-incomes is the bargaining response.

This response rests upon the idea that a high-income is partially determined by bargaining between an individual and their employer. The argument asserts that via bargaining power an individual manages to increase their income beyond the level necessary to keep them in the job. Taxation would reduce this effect because there would be less of an incentive to bargain. The employee would receive less of a profit from their bargaining as an increasing portion is taken in taxation⁶².

Rothschild et al have theorised that if this sort of response were happening, and it were possible to be able to tell who exactly was artificially increasing their income, then higher tax rates on high-incomes would be an efficient way of dealing with this⁶³. This behavioural response could be seen to explain much of the findings of this report's previous chapters, of an association between an increase in the income share of the top 1% and decrease in marginal tax rates, without an increase in economic growth. However, as discussed above there are other behavioural responses to taxation which may limit the optimal rate of taxation, despite the importance of bargaining. In particular, the possibility of greater migration of high-income earners.

CONCLUSION

The evidence reviewed in this chapter suggests that while some of the behavioural responses to taxation implied by traditional economic theory do not stand up to scrutiny, some are worth consideration in relation to tax rate increases. Migration, in particular, may be a problem if top tax rates were to be increased. This finding should however be reviewed in the context of neighbouring countries top income tax rates and the fact the average OECD top income tax rate is 47%⁶⁴ and more than 25% of OECD countries have top income tax rates of 50% or higher. It should also be understood within the context of the conclusions of the previous chapter, that increasing tax rates does not decrease growth. The suggested bargaining response therefore, may play a more important part as a response to taxation. In the next chapter we will explore this further by examining the relationship between productivity and executive pay-setting which suggests that there may be a mismatch between the two, as would normally be predicted by the bargaining response.

62 Piketty, Saez, Stantcheva 2011

63 Rothschild, Casey, Schuer 2014

64 Median and Mean, OECD Top statutory personal income tax rates March 2014

4. THE MARGINAL PRODUCTIVITY CONUNDRUM

A frequent claim in political and economic debate is that high-income earners justify their pay through high productivity. This is used to criticise attempts to increase the top rate of income tax, suggesting that such a move would punish those with exceptional skills vital to increased productivity and economic growth. These debates have wider significance, specifically in relation to taxation and the appropriate rate of taxation. This chapter explores the evidence supporting claims that high-incomes are primarily the result of the marginal productivity (the amount of extra added value brought by that particular employee) of those who receive them.

SUPER-MANAGERS AND THE DIFFICULTY OF DETERMINING VALUE

There are a number of high paying industries and roles in which there is a clear relationship between an employee's salary and the value added by the employee. However, this may not be the case in all high paying industries and roles. This chapter focuses on industries and roles where the relationship between productivity and high pay is questionable or unclear, with particular attention paid to executives and senior management.

The phenomenon of 'super-managers' is one of the key features of the increase in income share of the top 1% over the last 40 years⁶⁵. These highly paid executives and senior managers constitute a large and increasing proportion of the top 1%⁶⁶ and while executives may not be representative of other members of the top 1%, some of the points raised in this chapter also relate to other high-income jobs. The discussion below addresses the extent to which the increasing pay of executives and senior management is a reflection of increased value, in order to shed light on the marginal productivity conundrum.

"We looked at tens of thousands of interviews, and everyone who had done the interviews and what they scored the candidate, and how that person ultimately performed in their job. We found zero relationship. It's a complete random mess, except for one guy who was highly predictive because he only interviewed people for a very specialized area, where he happened to be the world's leading expert."

The above quote from Google's Senior Vice President of People Operations⁶⁷ illustrates a key problem in selecting the right candidate for a role. Even some of the best recruiters cannot say that they are secure in the knowledge that the chosen candidate is the best person to do the

65 Piketty 2014

66 Bakija, Heim 2009

67 New York Times 19th June 2013

job, unless there is a very specific skill-set needed to deal with a very specific problem.

Executive recruitment is not exempt from this problem. Senior managers require a wide variety of skills for a large collection of non-specific tasks and, as a consequence, such roles are very difficult to recruit for. The methods used to recruit CEOs and senior management are not systematically valid and provide little reason to think that the most talented person is selected for the job⁶⁸. While this problem may not in itself be unique to CEOs and senior management, recruitment of senior management is associated with an additional problem, specific to the industry: it is difficult to determine an executive's effectiveness even following their recruitment.

A key criterion for assessing an employee's productivity is the degree to which their role is replicable. Situations in which there are many people performing the same job make it possible to identify whether one person is performing the job better than another in comparable circumstances. The jobs of super-managers, however, are not replicable as they differ both over time and between different companies. Research makes clear that this could not be solved by experimenting with many different people doing the same job in a short period of time. This is not an effective method to assess how each employee affects a firm's productivity as the margin of error involved in any such trial would be sizable⁶⁹.

It is difficult to square the above finding with the assertion that companies are rewarding an individual's performance with increased pay packages. If performance can't be measured, how can pay reflect performance? This assertion is further undermined by Graham, Li and Qiu's study of variance between different CEO's pay in cases where there had been some change of CEO. The authors found that firm culture and other firm specific effects accounted for just under \$2m of variance within annual compensation, while individual manager effects accounted for \$2.5m of compensation variance⁷⁰. Crucially, this does not imply that the talent of individual managers accounts for this \$2.5m variation but rather that the variation is attributable to any individual factors that differentiate them from other CEOs; this could simply be their ability to bargain.

The evidence, therefore, suggests that talent doesn't necessarily determine pay and that other factors play a large role. Interestingly, some evidence suggests that increasing pay actually decreases productivity⁷¹. This will be addressed in greater depth in the next chapter.

68 Jacquart,Armstrong 2013

69 Piketty 2014

70 Graham, Li and Qiu 2012

71 Jacquart,Armstrong 2013

EXECUTIVE PAY AND TECHNOLOGY

The assertion that senior managers do not add sufficient value to justify their pay is controversial and disputed by many prominent economists. Greg Mankiw presents the most well known defence of the value added by the top 1%. He asserts that the top 1% receive the high-incomes that they do because they add an amount of value that is equivalent to, or higher than, their high salary.

Mankiw suggests that the dramatic increase in top incomes is mainly attributable to technology; this has allowed for an increase in efficiency and, crucially, only a small minority have the skills and education to take advantage of this new opportunity. Mankiw suggests that models which assume that a good CEO is simply hugely valuable for a company provide the best account of why CEO pay has risen⁷². Other economists have added to this account by suggesting that innovators and highly paid managers increase the productivity of the whole workforce⁷³.

There are, however, several problems with these arguments and theories defending high pay. Whilst some increases in inequality can be explained by technology providing additional gains to highly educated people, this does not explain the increasing gap between the top 10% and the top 1%. Indeed, research suggests that there is no educational difference between those in the top 10% and the top 1%⁷⁴.

Mankiw's argument rests on the assumptions that the labour market is working perfectly and that wages are allocated correctly by the market. However, there does not appear to be evidence that this is true. Given that, as explained above, there is informational dissymmetry (wage setters don't know the productivity of their employees), there seems to be good reason to doubt that the market is working efficiently.

EXECUTIVE PAY AND COMPANY VALUE

Studies looking at how executive pay has changed suggest that the picture is much more complicated than the increase in high pay resulting from higher rates of employee productivity. The ratio of CEO pay to firm market value in large companies has stayed relatively stable since the 1970s⁷⁵. Shue and Townsend have suggested that there is a rigid link between CEO pay and company value. This is due to the proportion of CEO compensation given in shares and other measures linked to company value which have a fixed amount (e.g. a certain amount of shares) rather than of a fixed value (e.g. £2m for increasing company performance). This pay arrangement leads to increasing compensation: the fixed amount increases in value with company size and, as there tends not to be a decrease in the fixed

72 Mankiw 2013

73 Ozimek 2011

74 Piketty 2014

75 Kaplan 2012, Gabaix, Landier, Sauvagnat 2014

amount of reward, a successor in a role receives a larger amount of compensation in value than their predecessor⁷⁶. Although a firm's size is important in explaining compensation growth, studies tend to overstate the importance of firm size by not controlling for other firm and staff effects⁷⁷.

There are two competing explanations of the link between firm size and executive compensation. One explanation states that larger organisations require more talented executives in order to manage them and so are compensated more highly. The other explanation suggests that this is simply a market failure and there has been no downward pressure on executive wages to counteract the rigidity effects of compensation. It is far from clear that the value of a CEO increases at the same rate as a company increases in size. A company that doubles in size doesn't necessarily get twice as much value from their CEO. Nor is it clear that the market for those who could serve as an executive for that much larger a company decreases in the same proportion.

EXECUTIVE PAY AND BARGAINING POWER

The argument that increasing executive pay is largely attributable to managerial power and bargaining has gained considerable traction in recent years. Nevertheless, there are several problems with this explanation of increasing top pay. In particular, these theories suggest that executives have captured pay setting bodies and are in effect partly setting their own pay, implying that more independent pay setting bodies would reduce pay for executives. Conyon's research, however, has suggested that there is no relationship between board or compensation committee structure and executive pay. The theories on managerial power and bargaining would suggest that consultants working for management would be more likely to increase pay, however Conyon found that, on the contrary, it was consultants working for the Board who were more likely to do so⁷⁸.

An alternate and slightly more persuasive explanation is one based on the "Lake Wobegon" effect⁷⁹. Companies want the best talent and are recommended by their compensation consultant to set their remuneration packages to be above the average, often in the upper quartile. Overall, this has the effect of increasing the average compensation as each company seeks to be above average⁸⁰. This idea of a common culture in remuneration is supported by the finding that in the US only five consultancy firms control 50% of the market on compensation consultancy⁸¹.

76 Shue, Townsend 2014

77 Graham, John, Li and Qiu, 2012

78 Conyon 2014

79 http://en.wikipedia.org/wiki/Lake_Wobegon#The_Lake_Wobegon_effect

80 Dew-Backer, Gordon 2005

81 Conyon 2014

EXECUTIVE PAY – A PRODUCT OF LUCK?

The question of luck is a key factor in this debate and one that muddies the waters considerably. Bertrand, Marianne and Mullainathan's analysis of CEO value specifically factored luck into the equation via a comparison of CEO pay increases from luck and those from performance. The authors did so by looking at factors that CEOs had no control over but that influenced their company's worth e.g. oil prices for oil companies and average industry performance, with how the company did relative to competitors. The study found that CEO pay increased as much for luck as it did for performance. Moreover the result suggested that in cases where a company was unlucky pay fell to a lesser extent than the reward increased for being lucky⁸². This strongly suggests an upward trend in CEO compensation due to factors beyond their productivity.

EXECUTIVE PAY - A MIXED BAG

The actual reason for rising executive pay is arguably a combination of factors, some based on increased productivity and some not. For example, in the financial services industry certain technological changes have increased demand for their services which has helped raise wages in the industry. However, there also appears to be gains unrelated to higher demand or productivity which account for a 30-50% wage increase in all jobs in the sector⁸³. To some extent 'superstar' effects mean that with greater sums at stake people are willing to pay an increased amount for small differences in skills and this affects many in the top 1% from actors to lawyers. Executive pay, however, appears to be a special case where pay has increased beyond what would be suggested by supply and demand⁸⁴. This has led some to suggest that managerial power is being exerted to bargain for higher salaries⁸⁵.

CONCLUSION

There are compelling reasons to believe that executive pay is higher than its marginal productivity would dictate. If this is true, it is reasonable to assume that increasing taxation on top executive pay would restrict top pay by limiting the incentives to increase it. Companies would, as a consequence, be less likely to increase a reward in the knowledge that its post-tax size would be limited and therefore its effectiveness as a tool to buy talent limited also. Furthermore, this would be unlikely to affect company efficiency negatively. The reasons for decreasing high pay are not, however, limited purely to making business more efficient. In the next chapter we will explore why high levels of pay may not only be detrimental to companies but also damaging to the wider economy and society.

82 Bertrand, Marianne, Mullainathan, 2001

83 Philippon, Reshef 2009; Bivens

84 Dew-Backer, Gordon 2005

85 Piketty 2014, Dew-Backer, Gordon 2005, Piketty, Saez, Stantcheva 2011

5. TAXATION: THE BENEFITS OF REDUCING HIGH PAY AND WHAT THIS MEANS FOR INEQUALITY

An argument consistently used in defence of high pay is that high-income individuals produce more value than the amount they are paid. According to this argument, the individual not only adds value to their company but also to society as a whole. As a consequence, it follows that there would be broader negative social effects if the individual were paid less and contributed less value. This argument is strongly linked to the concept of 'super-managers' and the need to keep top income tax rates low so as not to punish these high pay, high value individuals.

For example, Sumner argues that high tax rates could stop people from going into socially productive employment, especially if that employment requires a high level of initial investment in education. The example Sumner uses is that high-income taxes could decrease the number and/or quality of brain surgeons⁸⁶. The problem with this, and similar arguments, is that more socially productive jobs that pay above the average are still relatively low compared to high-incomes. To address Sumner's example, the average neurosurgeon in the UK is paid approximately £99k per year⁸⁷ which is well below the £150,000 rate⁸⁸ at which the top rate of income tax begins.

TAXATION - HIGH PAY AND NEGATIVE EXTERNALITIES

The argument used as a reason to support high pay can in fact be inverted as an argument for attempting to reduce it. Lockwood, Nathanson and Weyl suggest that governments might want to tax high-income jobs in order to combat negative externalities associated with those roles and to help allocate talent toward more socially efficient roles⁸⁹.

As it currently stands, graduates of elite universities are increasingly entering finance, which is associated with negative externalities such as financial crises, rather than medicine or the hard sciences, which are thought to have positive public benefits⁹⁰. The authors argue that increasing taxes on high-incomes would reduce the incentive to go into high paid roles like finance and make it more appealing for a graduate to take on a lower-paid job like a neurosurgeon.

86 Sumner 2011

87 <http://www.payscale.com/research/UK/Job=Neurosurgeon/Salary>. Chair of Neurosurgery at UCL is £77-103k p.a. http://jobs.ehealthcareers.com/jobs/chair-of-neurosurgery-head-of-the-division-of-neurosurgery-and-honorary-consultant-neurosurgeon-london-city-of-london-63902197-d?utm_source=Indeed&utm_medium=cpc&utm_campaign=Indeed

88 <http://www.hmrc.gov.uk/rates/it.htm>

89 Lockwood, Nathanson and Weyl 2013

90 Bivens, Mishel 2013

HIGH PAY AND INEQUALITY REDUCTION

There is a wider and less contentious argument that high pay in itself may have negative effects on society; in itself this provides a compelling reason to reduce it. Increased income inequality is associated with a wide range of negative effects. It damages a society's health, increases violent crime, reduces social mobility and increases debt and financial volatility⁹¹.

In addition to these negative social and economic effects, there is also research to suggest that increasing executive pay may have a negative effect on businesses. Smither's research has suggested that increased pay at the top of an organisation encourages short term decision making and a reduction of investment⁹², while the Hutton Fair Pay Review highlighted a range of academic studies showing that narrower pay dispersion improved organisational performance⁹³. This includes measures of pay equity being positively related to product quality and multiple measures of individual and organisational performance⁹⁴.

CONCLUSION

The research outlined above presents a compelling case for curbing top pay would be better for society, better for business and better for the wider economy and further substantiates the case for curbing top incomes via taxation. Not only would introducing a 50p top income tax rate not harm economic growth, but it would also bring benefits to business, the wider economy and our society as a whole.

91 <http://www.equalitytrust.org.uk/about-inequality/effects>

92 <http://www.waterstones.com/waterstonesweb/products/andrew+smithers/the+road+to+recovery/9756270/>

93 Hutton Review of Fair Pay in the Public Sector 2011, p22

94 D Cowherd and D Levine; Product Quality and Pay Equity Between Lower-Level Employees and Top Management: An Investigation of Distributive Justice Theory; *Administrative Science Quarterly*; Vol. 37, No. 2, (Jun., 1992), pp. 302-320; <http://www.jstor.org/stable/2393226>; M. Bloom; The Performance Effects of Pay Dispersion on Individuals and Organizations, *Academy of Management Journal*; Feb99, Vol. 42 Issue 1, p25 http://mario.gsia.cmu.edu/micro_2007/readings/Bloom_The%20performance%20effects.pdf; P Martins; "Dispersion in wage premiums and firm performance"; *Economics Letters* 01/2008; DOI:10.1016/j.econlet.2008.04.006 <http://ideas.repec.org/p/cgs/wpaper/8.html>; O Faleye, E Reis, A Venkateswaran "The Effect of Executive-Employee Pay Disparity on Labor Productivity" <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.175.6289&rep=rep1&type=pdf>

CONCLUSIONS AND POLICY RECOMMENDATIONS

The income share of the top 1% has rocketed in recent years while the real wages of the rest have stagnated or fallen. Reflecting this ever increasing polarisation, inequality of income and wealth has become a growing feature of the mainstream public, political and media debate. And yet, over the same period, the top rate of personal income tax has been reduced from 50% to 45%, with the argument that it is an economically sound policy as well as being in the public interest.

The empirical and historical research set out in this report indicates, however, that this belief is flawed. The evidence suggests that increasing, not decreasing, the top personal income tax rate may be the economically sound and socially benign policy.

Decreasing the top income tax rate contributed to an increase in the income share of the top 1% and this cut in taxes did not increase growth. The combination of these two facts suggests that dropping top income tax rates harmed 99% of the population by decreasing their share of national income without itself generating more national income. This alone provides a compelling argument for increasing the top income tax rate.

This report finds that the benefits of increasing the top income tax rate are not confined to a macroeconomic perspective. The research literature examined in this report suggests that the number of hours worked by those on high-incomes is not affected by top income tax rates, providing further grounds for a top income tax rate increase.

The extent to which the top income tax rate can be raised may, nevertheless, be limited by the migration of people on top incomes. Although the top income tax rate could be raised from its current level, there may be negative economic consequences if it were raised far above the top rate of tax in other countries to which high-income individuals may attempt to migrate.

However, a 50% income tax would be in line with many other countries with lower top 1% income shares. Denmark, Germany, the Netherlands, Austria, Belgium and Sweden, among others, have top personal income tax rates of 50% or higher and have strong stable economies with higher GDP per capita than the UK⁹⁵. The average OECD top income tax rate is 47%⁹⁶ and more than 25% of OECD countries have top income tax rates of 50% or higher. Given this international context, it is reasonable to assume that migration would not be a significant economic problem with a UK tax rate of 50% and we therefore recommend the reintroduction of a 50% top income tax rate.

95 World Bank GDP per capita (Current US \$)

96 Median and Mean, OECD Top statutory personal income tax rates March 2014

Contrary to widespread comment, increased taxation on top incomes would not unfairly reduce the value owed to high-income individuals. A wealth of literature makes clear that the pay of senior managers has been increasing faster than any measure of their value. Moreover, the gains from the reintroduction of a 50% top income tax rate would not be limited to business efficiency: there are multiple evidenced-based, arguments for its reintroduction involving positive effects for business, the wider economy and society.

Guided by the evidence set out in this report, our conclusion that the top income tax rate should be raised to 50% is not made primarily on the basis of the extra revenue it may raise, but on its pre-distributive effects for our economy. A 50% top income tax rate would reduce the income share of the top 1% without harming economic growth, while at the same time making 99% of us better off.

This report is part of the Fairer Tax strand of The Equality Trust's Fairer Stronger Economy project anticipating the 2015 general election. More information on this project and further policy recommendations are available on our website: www.equalitytrust.org.uk

REFERENCES

Atkinson, A. B., Piketty, T. & Saez, E. (2011). Top Incomes in the Long Run of History. *Journal of Economic Literature*, 49(1): 3–71.

Atkinson, A. B. & Leigh, A. (2008). Top Incomes in New Zealand 1921–2005: Understanding the Effects of Marginal Tax Rates, Migration Threat, and the Macroeconomy. *Review of Income and Wealth*, 54(2): 149–165.

Alain Trannoy, A. & Simula, L. (2009). Optimal Income Tax under the Threat of Migration by Top-Income Earners. Working Paper Series, Center for Fiscal Studies 2009:8, Uppsala University, Department of Economics.

Bakija, J., Cole, A. & Heim, B. (2010). Jobs and Income Growth of Top Earners and the Causes of Changing Income Inequality: Evidence from U.S. Tax Return Data. Department of Economics Working Paper 2010-24. Williams College, Williamstown, MA.

Bertrand, M. & Sendhil M. (2001). Are CEOs Rewarded For Luck? The Ones Without Principles Are. *Quarterly Journal of Economics*, 116(3): 901–932.

Bivens, J. & Mishel, L. (2013). The Pay of Corporate Executives and Financial Professionals as Evidence of Rents in Top 1 Percent Incomes. *Journal of Economic Perspectives*, 27(3): 57–78.

Bruenig, M. (2014, March 20). On Piketty's Capital: Reducing Soaring Executive Pay. Retrieved May 2, 2014, from Demos: <http://www.demos.org/blog/3/20/14/piketty%E2%80%99s-capital-reducing-soaring-executive-pay>

Bryson, A., Forth, J. & Zhou, M. (2014). Same or Different? The CEO Labour Market in China's Public Listed Companies. *Economic Journal*, Royal Economic Society, 124(574): F90–F108, 02.

Bucovetsky, S. (2003). Efficient Migration and Income Tax Competition. *Journal of Public Economic Theory*, 5(2): 249–78.

Canyon, M. J. (2014). Executive Compensation and Board Governance in US Firms. *The Economic Journal*, 124 (574): F60–F89.

Corlett, A. (2014, January 16). Taxing poverty is wrong — lift low earners out of National Insurance. Retrieved May 13, 2014, from Centre Forum: <http://centreforum.org/index.php/14-news/releases/581-taxing-poverty-is-wrong-media-release>

Dew-Becker, I. & Robert J. G. (2005). Where did the Productivity Growth Go? Inflation Dynamics and the Distribution of Income. Paper presented at Brookings Inst. panel, Washington, DC, Sept. 2005.

Egger, P. & Radulescu, D. M. (2009). The Influence of Labour Taxes on the Migration of Skilled Workers (0000). *World Economy*, 32 (9): 1365-1379.

Facundo Alvaredo, T.A. (2014). Retrieved May 20, 2014, from World Top Incomes Database: <http://topincomes.g-mond.parisschoolofeconomics.eu/>

Gabaix, X., Landier, A. & Sauvagnat, J. (2014). CEO Pay and Firm Size: An Update After the Crisis. *Economic Journal*, Royal Economic Society, 124(574): F40-F59, 02.

Goolsbee, A. (2000). What happens when you tax the rich? Evidence from executive compensation. *Journal of Political Economy*, 208(2): 352-378.

Gravelle, J. G., & Marples, D. J. (2014). Tax rates and economic growth. Washington, DC: Congressional Research Service.

Graham, J. R., Li, S. & Qiu, J. (2012). Managerial Attributes and Executive Compensation. *Review of Financial Studies*, 25(1): 144-186.

Hungerford, T. L. (2012). Taxes and the economy: An economic analysis of the top tax rates since 1945 (Updated). Washington, DC: Congressional Research Service.

Jacquart, P. & Armstrong, S. (2013). Are Top Executives Paid Enough? An Evidence-Based Review. *Interfaces*, 43: 580 - 589.

Jaimovich, N. & Rebelo, S. (2012). Non-linear Effects of Taxation on Growth. London, Centre for Economic Policy Research.

Kaplan, S. N. (2012). Executive Compensation and Corporate Governance in the U.S.: Perceptions, Facts and Challenges. Chicago Booth Research Paper No. 12-42; Fama-Miller Working Paper.

Krugman, P. (2014, May 8). Why We're in a New Gilded Age. *The New York Review of Books*.

Kleven, H. J., Landais, C. & Saez, E. (2013). Taxation and International Migration of Superstars: Evidence from the European Football Market. *American Economic Review*. American Economic Association, 103(5): 1892-1924.

Landon-Lane, J. & Robertson, P. (2002). Can government policies increase national long-run growth rates?. Departmental Working Papers 200213, Rutgers University, Department of Economics.

Lockwood, B., Nathanson, C. & Weyl, E. G. (2014). Taxation and the Allocation of Talent. Working paper. Available at SSRN: <http://ssrn.com/abstract=1324424> or <http://dx.doi.org/10.2139/ssrn.1324424>

Mankiw, N. G. (2013). Defending the One Percent. *Journal of Economic Perspectives*, 27(3): 21-34.

Manski, C. (2012). Income Tax and Labour Supply: Let's Acknowledge What We Don't Know. Vox, August, <http://www.voxeu.org/article/income-tax-and-labour-supply-let-s-acknowledge-what-we-don-t-know>

Mirrlees, J. (ed.) (2010). Dimensions of Tax Design: the Mirrlees Review. Institute for Fiscal Studies (IFS). OUP Oxford.

Moriguchi, C. & Saez, E. (2008). The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics. The Review of Economics and Statistics, MIT Press, 90(4): 713-734, 07.

OECD. (2014). Focus on Top Incomes and Taxation in OECD Countries: Was the crisis a game changer? OECD.

Ostry, J., Berg, A. & Tsangarides, C. (2014). Redistribution, Inequality, and Growth. IMF Staff Discussion Note.

Philippon, T. & Reshef, A. (2009). Wages and Human Capital in the U.S. Financial Industry: 1909-2006. NBER Working Paper, No. w14644.

Piketty, T. (2014). Capital in the Twenty-First Century. Harvard University Press.

Piketty, T., Saez, E. & Stantcheva, S. (2012). Optimal Taxation of Top Labor Incomes - A Tale of Three Elasticities. NBER Working Paper.

Piketty, T., Saez, E. and Stantcheva, S. (2011). Taxing the 1%: Why the top tax rate could be over 80%. Vox, December, <http://www.voxeu.org/index.php?q=node/7402>

Robert, A. & Moffitt, W. (2000). Taxation and the Labor Supply: Decisions of the Affluent. Slemrod, J. (ed.) Does Atlas Shrug? Economic Consequences of Taxing the Rich. Russell Sage Foundation and Harvard University Press.

Roine, J., Vlachos, J. & Waldenström, D. (2007). The Long-run Determinants of Inequality: What Can We Learn from Top Income Data?. Working Paper Series 721, Research Institute of Industrial Economics, revised 30 Apr 2008.

Rothschild, C. & Scheuer, F. (2011). Optimal Taxation with Rent-Seeking. NBER Working Papers, No 17035, National Bureau of Economic Research.

Saez, E., Slemrod, J. & Giertz, S. H. (2012). The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review. Journal of Economic Literature, American Economic Association, 50(1): 3-50.

Shue, K. & Townsend, R. R. (2014). Growth Through Rigidity: An Explanation of the Rise of CEO Pay. Available at SSRN: <http://ssrn.com/abstract=2424860> or <http://dx.doi.org/10.2139/ssrn.2424860>

Sumner, S. (2011, November 23). Saez and Diamond explain taxes in the Journal of Economic Propaganda. Retrieved May 21, 2014, from TheMoneyIllusion: <http://www.themoneyillusion.com/?p=12054>

Tanzi, V. & Zee, H. H., (1997). Fiscal Policy and Long-Run Growth. Staff Papers, International Monetary Fund, 44 (2):

179-209.

Thewissen, S. (2013). Is it the Income Distribution or Redistribution that Affects Growth, Socio- Economic Review. Doi: 10.1093/ser/mwt019.

Wilkinson, R. & Pickett, K. (2009). The Spirit Level: Why Greater Equality Makes Societies Stronger. New York: Bloomsbury Press.

Worstell, T. (2012, 9 28). Why France's 75% Income Tax Rate Is Going To Be So Disastrous. Retrieved May 3, 2014, from Forbes: <http://www.forbes.com/sites/timworstell/2012/09/28/why-frances-75-income-tax-rate-is-going-to-be-so-disastrous/>

Do we need job creators? (2011, November 23). Retrieved May 21, 2014, from Modeled Behavior: <http://modeledbehavior.com/2011/11/23/do-we-need-job-creators/>

IFS: 50p tax will raise 'little revenue' for UK economy. (2014, January 27). Retrieved May 20, 2014, from ITV: <http://www.itv.com/news/update/2014-01-27/ifs-50p-tax-will-raise-little-revenue-for-uk-economy/>

Migrant Entrepreneurs: Building Our Businesses, Creating Our Jobs. (n.d.). Retrieved May 21, 2014, from Centre for Entrepreneurs: <http://www.centreforentrepreneurs.org/campaign/migrant-entrepreneurs>.

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