

This paper provides analysis of the potential revenues that could be raised from an increase in the Additional Rate (AR) of Income Tax in Scotland from 45p to 50p for incomes above £150,000 and gives an overview of the impacts of potential revenue risks and mitigating actions associated with these.¹

The paper updates the analysis published by the Scottish Government in March 2016 on this subject to reflect recent developments, the discussion in *The Role of Income Tax in Scotland's Budget*² and technical advice and inputs from the Council of Economic Advisers (CEA).³

Summary

- The AR of income tax is currently set at 45p, and levied on incomes above £150,000. There are estimated to be around 20,000 AR taxpayers in Scotland in 2018-19. Whilst they represent less than 1% of Scottish adults, they are expected to contribute around 19% to total Scottish income tax liabilities.
- AR taxpayers tend to be more mobile and have more opportunities for reducing their tax bill compared to taxpayers on lower incomes. As such, an increase in the AR is likely to generate a larger behavioural response than changes to the basic or higher rates.
- In the short term, the most significant risk to revenues comes from differential tax rates in Scotland and the rest of the UK as well as forestalling as individuals may bring income forward to the previous tax year to benefit from lower tax rates.
- The larger the increase in the AR, both compared to the previous year and relative to the rest of the UK, the greater the potential behavioural response and associated negative impact on total income tax revenues.
- The evidence presented in this paper relates to a 5p change in the AR. Changes below this level will result in a proportionately lower behavioural response as at the margin the differential relative to the rUK is lower. These risks could therefore be alleviated if the AR is increased by less than 5 pence.
- Since AR taxpayers are more likely to adjust their behaviour over time, the associated revenue loss may be larger in the longer term. However, individuals' choice of where to live is complex, and taxation is only one factor which people take into account. For example, the quality of public services, housing costs and related factors are also an important consideration.
- In order to gauge the responsiveness of taxpayers to tax changes, the academic literature provides *taxable income elasticities* (TIEs) which measure the percentage change in taxable

¹ Previous Scottish Government analysis from March 2016 is available [here](#).

² The discussion paper is available [here](#).

³ The CEA have provided on-going advice to the Scottish Government on the analysis of the revenue risks and potential mitigation actions associated with differential additional rates of income tax between Scotland and the rUK. However, decisions around rates and bands sit with Scottish Ministers. The minutes of the CEA's meeting in January 2017 are available [here](#). Officials have also had further discussions and input from Council members with calls in June, August and November this year.

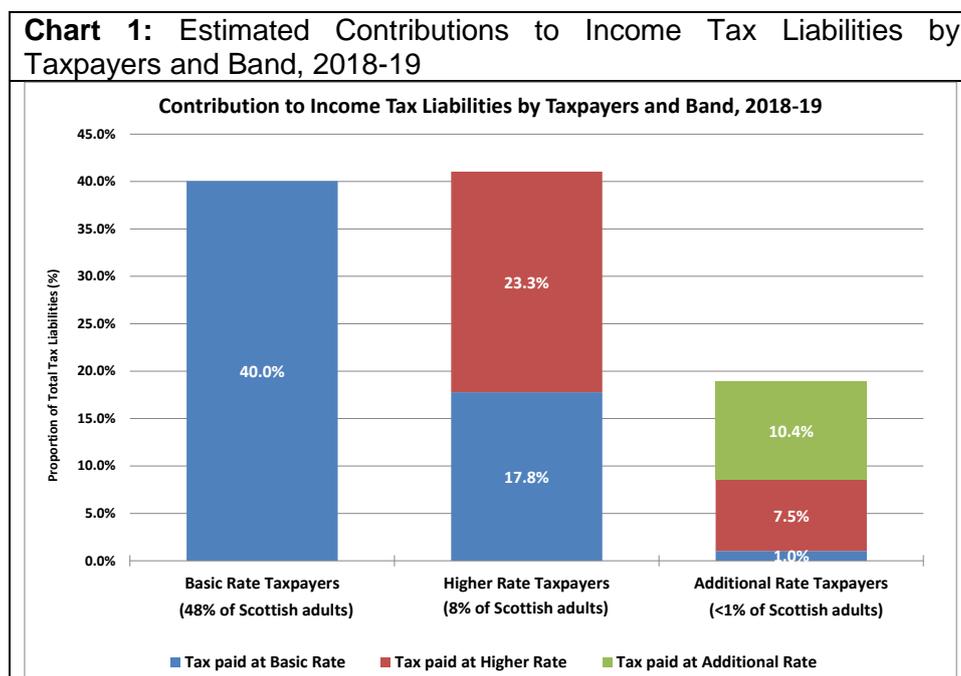
income in response to a one per cent change in the net of tax rate.

- Whilst TIEs cover a range of behaviours, such as migration, income shifting and changes in the hours worked, many of these empirical studies are concerned with national tax reforms.
- The Scottish context is more complex as differential tax policy in Scotland and the rest of the UK creates new opportunities for behaviour change. For example, high income taxpayers could have more than one UK address and therefore change their residency on paper if income taxes are lower in the rest of the UK. Alternatively, some high income earners could decide to incorporate to benefit from lower corporation tax rates relative to income tax rates, with detrimental impacts on Scottish income tax receipts.
- A review of the existing evidence base suggests that TIEs for AR taxpayers in Scotland are likely to fall into the range of 0.35 to 0.75 in the short run. However, TIEs are also likely to vary within the AR taxpayer group and individuals just above the £150,000 AR threshold are likely to be less responsive to tax changes than the AR taxpayer group as a whole.
- The TIEs at the bottom of this range would imply that a 5p rise in the AR would raise somewhere in the region of £53 million, whilst the TIEs at the top of this scale would imply that such a tax rise would reduce tax revenue by around £24 million.
- Given the findings in the literature, the impact of an increase in the AR to 50p remains uncertain. However, if the behavioural response was around the midpoint of this range, it would suggest that the revenue raised by a 5p increase in the AR would be in the low single millions.
- There is therefore likely to be a revenue and policy risk associated with increases to the AR that result in a substantial divergence with the equivalent rate in the rest of the UK.

1. Who pays the Additional Rate of income tax in Scotland?

It is estimated that around 20,000 taxpayers, or less than 1% of Scottish adults, will pay the AR of income tax in 2018-19.⁴ As illustrated in Chart 1, AR taxpayers are expected to make a significant contribution to total income tax liabilities, accounting for around 19% of the total tax take in 2018-19. This means that, as with most countries, total revenue from income tax is relatively reliant on these top earners and that the behaviour of a relatively small number of individuals may have a disproportionate impact, positive or negative, on overall Scottish income tax liabilities. However, only 10% of income tax liabilities are directly attributable to the 45p rate as AR taxpayers also pay the basic and higher rate of income tax on their first £150,000 of earnings.

It is also important to note that Scottish AR taxpayers are overrepresented in certain industries, such as Professional Services, Financial Services & Insurance, and Mining & Quarrying. This could imply that they are relatively mobile as these industries tend to compete for workers globally.



2. Behavioural impacts

There is uncertainty associated with estimating the revenue which could be raised from changing income tax for very high earners. This reflects the uncertain behavioural response relating to the tax policy changes which could either erode the revenues raised from a tax rise or lessen the cost of a tax cut. Potential behavioural responses may include:

- **Avoidance** - artificially (but legally) reducing one's tax liability. An example of this is incorporation where individuals form companies to minimise tax;
- **Evasion** - which illegally reduces tax liabilities;
- **Economic responses** - seeking work or increasing the number of hours worked or vice versa;
- **Migration** - taxes could also affect migration, both into and out of Scotland.

Taxpayers' responsiveness to changes in income tax policy are usually estimated through *taxable income elasticities* (TIEs) which measure the percentage change in taxable income in response to

⁴ This is based on the same forecasts of earnings and employment growth used in *The Role of Income Tax in Scotland's Budget*.

a one per cent change in the net of tax rate. The more responsive taxpayers are, i.e. the greater the TIE, the larger will be the change in their taxable income and hence tax receipts.

Whilst there is a general consensus in the academic literature that TIEs are much higher for those on higher incomes, the impact of behaviour change is uncertain and is influenced by a range of factors.⁵ In the UK context, the IFS recently published new analysis on taxpayers' response to the introduction of the 50p rate (for incomes above £150,000) in April 2010. The researchers concluded that, despite careful analysis, it has not been possible to obtain precise or robust estimates of the responsiveness of top earners in the UK. Instead, different methodologies, data sources and assumptions result in estimates of the TIE that range from 0.31 to around 1. The IFS considers HMRC's TIE of 0.48 (for all AR taxpayers) as a reasonable central estimate for policy-costing purposes at the UK level.⁶

However, evidence from historical tax policy changes in the UK may not fully capture the uncertainties related to differential tax policy in Scotland and the rest of the UK which would create new opportunities for behaviour change, more specifically:

- Scottish income tax powers only apply to non savings non dividend (NSND) income. Since this is largely income from employment, there may be fewer opportunities for individuals to reduce their tax liabilities compared to income from savings and dividends. This could reduce the TIE.
- Behavioural effects between Scottish and the rest of the UK taxpayers may be more significant than estimated in the existing literature because labour mobility between Scotland and the rest of the UK could be larger than between the UK and other countries. This is because there are no cultural or language barriers and many individuals have much closer ties with the rest of the UK and may therefore relocate easily. Moreover, many top rate taxpayers may be able to choose their residency, particularly if they are working in companies with locations and activities across the UK. It may also be possible for individuals to live in England but continue to work in Scotland. Finally, instead of migrating physically, high-income Scottish taxpayers could move their residence by rearranging their domestic affairs – for example by deciding to spend more time at a London flat than in an Edinburgh house. This means that TIEs in Scotland are likely to be higher, particularly for the highest earners.

In previous modelling, the Scottish Government therefore adopted a range of TIEs for all AR taxpayers of 0.35 to 0.75, with a view to keep these under review as new information on the behaviour of Scottish taxpayers becomes available. These TIEs have been updated since to reflect the recent findings by the IFS that there is variation within the AR taxpayer group: taxpayers just above the £150,000 AR threshold appear to be less responsive to tax changes than the AR taxpayer group as a whole. The behavioural analysis therefore adopts a range of 0.35 to 0.75 for the TIEs of those earning more than £250,000 and slightly smaller ranges for taxpayers earning less than that. This is set out in more detail in the Annex.

Based on advice by the Council, the Scottish Government also reviewed the limited, but growing, number of empirical studies which attempt to quantify the impact of changes in taxation on people's relocation choices, both in relation to mobility across different countries and mobility across different regions or states *within* countries. The majority of these studies is focused on (semi) migration elasticities which measure the percentage change in the number of people migrating in response to a 1 percentage point change in the *average* tax rate – a slightly different

⁵ For an overview of different studies, see HMRC (2012), pages 18-19; available [here](#)

⁶ The IFS analysis is summarised in a briefing paper available [here](#).

definition to the standard TIE. This is due to the fact that migration decisions are thought to be based on total take home pay rather than marginal tax rates.

On balance, the empirical evidence is inconclusive but points towards potentially small, tax induced migration responses across state and regional borders for top earners in the United States and Spain, with estimates of the percentage of taxpayers migrating in response to tax changes ranging from close to zero to 0.23. There is mixed or little evidence of such behaviour in other federations, such as Canada and Switzerland.⁷ These studies suggest that standard TIEs, which often only consider nationwide changes in income tax, may have to be uplifted, albeit by a small amount, to account for differential tax rates across regions or states and the larger behavioural response associated with this.

This is also in line with evidence presented by the Resolution Foundation which finds that internal migration within the UK has declined over the past two decades as the proportion of people moving region and/or employer has fallen slightly from 0.8% to 0.6%. Whilst this may be partly due to the economic slowdown associated with the financial crisis, mobility is still much lower than it was at the turn of the millennium.⁸

In reality, taxpayers' responses are likely to be more nuanced. For example, some top earners may choose to 'incorporate themselves' as businesses for tax motivated reasons, that is to benefit from lower corporation and capital gains tax rates. This is of particular relevance to Scotland's public finances as taxpayers who incorporate would no longer pay tax on earned income to the Scottish Government but would pay corporation tax, capital gains tax and income tax on dividends to the UK Government. As illustrated in Chart 2, there has been strong growth in the number of individuals incorporating in Scotland⁹, in particular since 2014.



⁷ For an overview, see for example Young, Varner et al. (2016), "Millionaire Migration and Taxation of the Elite: Evidence from Administrative Data", *American Sociological Review* 2016, Vol. 81(3), 421-446; and Cohen, Lai, Steindel (2011), A Replication of "Millionaire Migration and State Taxation of Top Incomes: Evidence form a Natural Experiment", *Public Finance Review* 2015, Vol. 43(2), 206-225.

⁸ Resolution Foundation, 15 August, available [here](#).

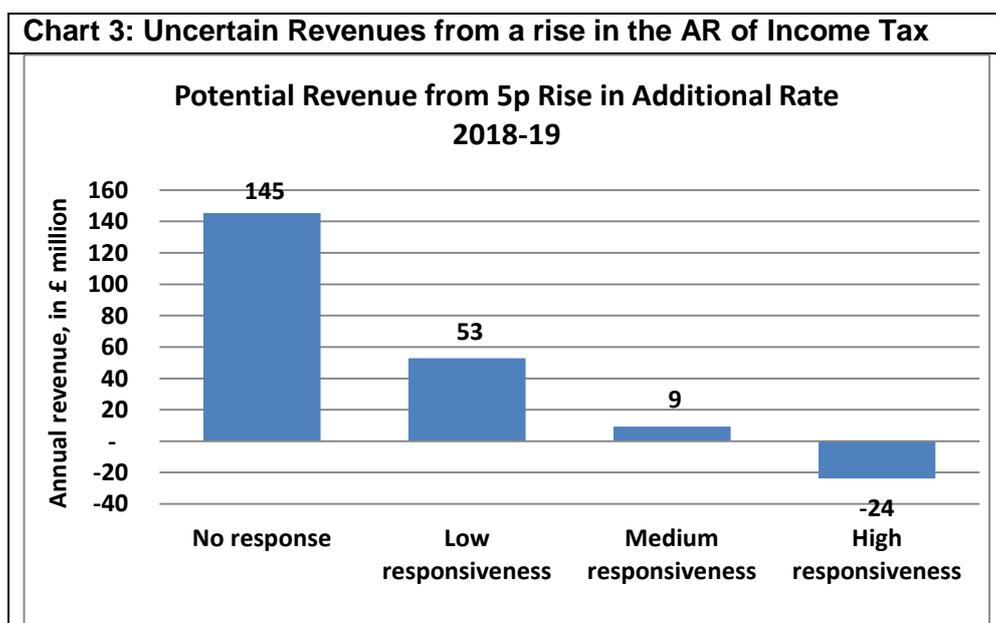
⁹ This Chart uses data from the Annual Population Survey (APS) which asks self-employed individuals if they were the sole director of their own company as a proxy for incorporations.

Incorporation is not possible for all employees – many work for organisations and cannot incorporate for tax purposes. For those that can, a suite of factors will inform their decision on whether or not to incorporate including the regulatory environment, legal liabilities, access to finance and other administrative requirements. Research from the Institute for Fiscal Studies¹⁰ indicates that at least some of the recent rise in incorporations is a direct result of preferential tax treatment of owner managers, relative to employees, although these tax advantages would have to be quite large to dominate the other factors.

Finally, anecdotal evidence suggests that some top earners already split their time between Scotland and London, and these individuals can change their tax residency with little impact on their physical location.

3. Estimating the revenue impact of a 5p increase in the Additional Rate

Chart 3 shows how uncertain the revenues from a 5p rise in the AR to 50p are. This is done by comparing the policy proposal against the tax regime in 2018-19 if no changes were made and the Higher Rate Threshold increased in line with inflation.¹¹ More information on the assumptions underpinning each result are provided in the Annex. Revenue projections for the income tax policy set out in the Scottish budget will be provided by the Scottish Fiscal Commission.



If top earners did not change their behaviour in response to the rise in the AR, the policy is expected to raise around £145 million in Scotland in 2018-19. With a low level of behavioural responsiveness, the policy is forecast to raise £53 million, whilst with a high level of behavioural response, the policy could potentially result in a £24 million loss in revenues for the Scottish Government.

Short term responses and forestalling

The scale of the behavioural response may also differ across time. For example, and potentially in addition to the behaviour captured in Chart 3, the immediate response to the policy change might

¹⁰ IFS Green Budget 2017, available [here](#).

¹¹ This analysis does not consider the implications of the accompanying block grant adjustment (BGA) and assumes that the AR remains unchanged at 45p in the rest of the UK.

be more marked if taxpayers take the one-off opportunity to bring forward some of their income to the previous tax year in order to benefit from the lower 45p rate. While this would boost receipts in 2017-18, revenues would be lower in 2018-19. Since forestalling largely moves income tax receipts across years, the net loss to the Scottish Budget is likely to be fairly limited. However, due to the way the Fiscal Framework currently operates, the Scottish Government would see the full loss in income tax receipts from forestalling in 2018-19 but would not receive any potential uplift in 2017-18 receipts until re-conciliation occurred in Autumn 2019 (for inclusion in the Draft Budget 2020-21). Forestalling behaviour therefore represents a significant short term risk to the Scottish Budget unless this impact can be mitigated through other means.

The greater the rise in the AR, the greater the incentives to shift income across time. An increase in the AR of less than 5p is therefore likely to raise more tax revenue in 2018-19. The extent of such forestalling behaviour also depends on the timing of the policy announcements. The earlier the policy were to be announced, the greater the effect as it would give taxpayers more time to re-arrange their tax affairs.

Long term responses

Council Members also highlighted that the behavioural response could be more pronounced in the long term as, over time, the tax savings from shifting income to the rest of the UK or into other forms of income, may outweigh the costs of moving residence or incorporating. This means that the revenue risks may increase over time if taxpayers believe the policy change to be permanent.

Finally, the TIEs applied in the analysis above relate to a 5p change in the Additional Rate of Income Tax. However, it is important to note that behavioural responses to changes in the top rate are likely to be non-linear. In other words, for every 1p rise in the Additional Rate, the behavioural response is likely to increase disproportionately. As a result, behavioural responses might be significantly lower if the Additional Rate were to be increased by less than 5p as the differences in top marginal rates between Scotland and the UK would be much lower.

4. Policy risk

As well as the tax considerations, there are many other elements that will likely factor into an individual's decision on whether or not to migrate, and to where, such as access to and quality of public services. Many top earners are unlikely to relocate their families and jobs in response to a small change in their net income. However, the Scottish budget is highly reliant on the receipts of high earners. As noted above, the highest earning 1% of Scottish adults are expected to account for around 19% of liabilities in 2018-19. Given the high average tax liabilities of AR taxpayers, even the loss of a limited number of very high earning individuals could have a noticeable impact on Scottish income tax revenues.

For example, an AR taxpayer earning the estimated mean wage within that group in 2018-19 (£306,000) would pay taxes of just above £130,000 following a 5p rise - an extra £7,800 compared to the current regime. On average, if only 1,100 (or 5%) of the projected 20,000 AR taxpayers in 2018-19 left Scotland, or adopted other measures to reduce their Scottish tax liability, the policy change would raise no extra revenue unless it was accompanied by other substantial changes to income tax policy.

Even if the proposed tax reform does not affect the relocation choices of taxpayers currently residing in Scotland, it may have signalling effects. Whilst tax is just one of many deliberations

informing location choices, alongside the quality of public services and housing for example, some top earners may choose not to move to Scotland.

Council Members also noted that a change in Additional Rate income tax policy may have implications for businesses and the wider Scottish economy. For example, there is a possibility that labour costs in Scotland could increase since businesses would have to offer higher gross wages to offset the increase in tax and retain highly skilled staff at this level. This would however reduce the behavioural response by individuals to an increase in the AR.

In conclusion, there is therefore likely to be a revenue and policy risk associated with increases to the AR that result in a substantial divergence with the equivalent rate in the rest of the UK.

It is important to note, however, that a number of advanced economies have successfully implemented higher taxes for high earners than the UK or Scotland. The overall tax burden in Scotland, as a share of GDP, is also below the OECD average. As such, the extent to which any increase in taxes in Scotland is matched by an improvement to public services will be important in determining the net impact that such a reform could have on Scotland's attractiveness. In addition, a recent report by the International Monetary Fund (IMF) suggests that there is no strong evidence that increasing the progressivity of the tax system will reduce economic growth.¹² They conclude that *"there would appear to be scope for increasing the progressivity of income taxation without significantly hurting growth for countries wishing to enhance income redistribution."*¹³ The next section of this paper outlines some mitigation options that the Scottish Government could pursue which could reduce the revenue risk and associated impact.

Finally, when considering policy changes, it is important to remember that tax is only one side of the equation and the role of public spending has to be considered alongside tax. Taxpayers across Scotland have access to a range of services and benefits which are not available elsewhere in the UK, such as no charges for prescriptions, undergraduate tuition or personal care for older people and concessionary travel for older and disabled people. This reduces the costs for individuals by providing for services collectively.

5. Mitigation Strategies

Under the terms of the Scotland Act (2016) and associated Fiscal Framework the collection and management of income tax remains the responsibility of HMRC. This includes the management of risks to tax revenues from illegal tax evasion.

HMRC are committed to providing the same tax enforcement and compliance standards to Scottish income tax as in the rest of the UK, in addition to providing new actions needed around ensuring appropriate identification of Scottish taxpayers. The Scotland Act (2016) allows the Scottish Government to request for additional work to be done in this space. Any additional work that is done by HMRC to investigate compliance and enforcement as a result of diverging rates of tax in Scotland from rUK would likely be recharged to the Scottish Government.

HMRC have an extensive programme of enforcement and compliance work across the UK tax base and report on this regularly¹⁴. As well as this, they are scrutinised by the National Audit

¹² IMF Fiscal Monitor. Available [here](#).

¹³ *Ibid.*, page 13.

¹⁴ For example, see HMRC (2017) "HMRC quarterly performance updates". Available [here](#).

Office (NAO) who publish reports which help Parliament to hold the Government to account, as well as raise awareness amongst the general public of HMRC's approach to tackling fraud.

The NAO have published papers covering HMRC's approach to tax fraud in general (i.e. not specific to Income Tax)¹⁵, evasion and avoidance of the Scottish Rate of Income Tax (SRIT)¹⁶ and HMRC's approach to collecting tax from high net worth individuals¹⁷, all of which are relevant for this discussion. The NAO make recommendations for further improvement in HMRC's approach. HMRC's operation of Scottish income tax (with its key action of identifying Scottish taxpayers accurately and robustly) will be monitored closely by the Scottish Government, and will be annually audited by the NAO and Audit Scotland.

Other potential behaviours, such as migration and incorporation are legal. However, tax liabilities are likely to only form one component of any migration or incorporation decision. For example, access to and quality of public services, labour market conditions and availability of affordable housing are likely to play significant roles in an individual's decision to migrate. The financial cost alone of migrating would equally set a reasonably large tax hurdle for any divergence to be considered against.

6. Conclusion

Income tax forms part of a wider basket of taxes that could be changed to raise additional revenue. However, Scotland's tax powers remain limited to a small number of taxes of which income tax is the biggest lever, with around 30% of the Scottish budget funded from this tax in 2018-19.

The revenue and policy risks associated with a 5p rise in the AR therefore remain an important consideration. Behavioural responses vary within the AR group but may also vary across time. In the short term, the biggest risk to revenues comes from differential income tax policy in Scotland and the rest of the UK since AR taxpayers tend to have more choice regarding their residence and other means of minimising their tax liabilities than lower earners. Taxpayers may also have an incentive to bring forward their income to the previous tax year to minimise their tax bill in 2018-19.

In the longer term, it also becomes less costly for taxpayers to re-arrange their tax affairs, either by moving residency or by incorporating themselves as a business, so that the revenue risks are likely to increase over time. These short term and long term risks could be alleviated by increasing the AR by less than 5 pence.

Based on the current evidence, if there is a comparatively smaller behavioural response to a 5p rise in the AR, the policy is estimated to raise somewhere in the region of £53 million. With a high behavioural response, such a tax rise would reduce tax revenue by around £24 million.

Given the findings in the literature, the impact of an increase in the AR to 50p remains uncertain. However, if the behavioural response was around the midpoint of this range, it would suggest that the revenue raised by a 5p increase in the AR would be in the low single millions. There is therefore likely to be a revenue and policy risk associated with increases to the AR that result in a substantial divergence with the equivalent rate in the rest of the UK.

¹⁵ NAO (2015) "Tackling tax fraud: how HMRC responds to tax evasion, the hidden economy and criminal attacks". Available [here](#).

¹⁶ NAO (2016) "The administration of the Scottish Rate of Income Tax 2015-16". Available [here](#).

¹⁷ NAO (2016) "HMRC's approach to collecting tax from high net worth individuals". Available [here](#).

ANNEX: Taxable Income Elasticities for AR Taxpayers

The table below compares the taxable income elasticities used in this paper with previous analysis published in March 2016.

Overview of TIEs		December 2017 Analysis			March 2016 Analysis	
Income ranges		Low	High	Medium	Low	High
From	To	Responsiveness	Responsiveness	Responsiveness	Responsiveness	Responsiveness
150,000	200,000	0.25	0.35	0.48	0.35	0.75
200,000	250,000	0.35	0.45	0.48	0.35	0.75
250,000	300,000	0.35	0.75	0.48	0.35	0.75
300,000	500,000	0.35	0.75	0.48	0.35	0.75
500,000	1,000,000	0.35	0.75	0.48	0.35	0.75
1,000,000		0.35	0.75	0.48	0.35	0.75

The TIEs set out in the “low” and “high” responsiveness scenarios are consistent with those used in *The Role of Income Tax in Scotland’s Budget*. The “medium” responsiveness scenario applies the central estimate of 0.48 from HMRC (2012) across all AR taxpayers. In their official policy costing for the reduction in the AR to 45p in the UK, HMRC applied an elasticity of 0.45 which is slightly below the central estimate found in their study.

By comparison, the Scottish Government analysis from March 2016 adopted the same TIEs of either 0.35 or 0.75 for all AR taxpayers.