

## Agenda – Y Pwyllgor Cyllid

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Lleoliad: I gael rhagor o wybodaeth cysylltwch a:  
Ystafell Bwyllgora 5 – Tŷ Hywel **Bethan Davies**  
Dyddiad: Dydd Iau, 27 Chwefror 2020 Clerc y Pwyllgor  
Amser: 09.00 0300 200 6565  
[SeneddCyllid@cynulliad.cymru](mailto:SeneddCyllid@cynulliad.cymru)

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### 1 Cyflwyniad, ymddiheuriadau, dirprwyon a datgan buddiant

(09.00)

### 2 Papurau i'w nodi

(09.00)

(Tudalennau 1 – 4)

Cofnodion y cyfarfod a gynhaliwyd ar 6 Chwefror 2020

Cofnodion y cyfarfod a gynhaliwyd ar 12 Chwefror 2020

#### 2.1 Llythyr gan y Dirprwy Weinidog Iechyd a Gwasanaethau Cymdeithasol – Bil Plant (Diddymu Amddiffyniad Cosb Resymol) (Cymru) – 11 Chwefror 2020

(Tudalennau 5 – 6)

### 3 Effaith amrywiadau yn y dreth incwm genedlaethol ac is-genedlaethol: Sesiwn dystiolaeth 1

(09.00–09.55)

(Tudalennau 7 – 22)

David Phillips, Cyfarwyddwr Cyswllt, y Sefydliad Astudiaethau Cyllid

Papur 1 – Tystiolaeth ysgrifenedig: Institute for Fiscal Studies (Saesneg yn unig)

Briff ymchwil

### Egwyl

(09.55–10.00)



- 4 Effaith amrywiadau yn y dreth incwm genedlaethol ac is-genedlaethol: Sesiwn dystiolaeth 2**  
(10.00–11.00) (Tudalennau 23 – 48)  
Ed Poole, Uwch-ddarlithydd mewn Gwleidyddiaeth a Chysylltiadau Rhyngwladol, Prifysgol Caerdydd  
Guto Ifan, Cymrawd Ymchwil, Canolfan Llywodraethiant Cymru, Prifysgol Caerdydd  
David Bradbury, Pennaeth yr Is-adran Polisi Trethi ac Ystadegau, y Sefydliad ar gyfer Cydweithrediad a Datblygiad Economaidd  
Bert Brys, Pennaeth Uned Polisi Trethi Gwledydd ac Uned Trethi Personol ac Eiddo, y Sefydliad ar gyfer Cydweithrediad a Datblygiad Economaidd
- Papur 2 – Tystiolaeth ysgrifenedig: Dadansoddi Cyllid Cymru (Saesneg yn unig)  
Briff ymchwil
- 5 Cynnig o dan Reol Sefydlog 17.42 i benderfynu gwahardd y cyhoedd o weddill y cyfarfod**  
(11.00)
- 6 Effaith amrywiadau yn y dreth incwm genedlaethol ac is-genedlaethol: Trafod y dystiolaeth**  
(11.00–11.20)
- 7 Craffu ar Ail Gyllideb Atodol Llywodraeth Cymru ar gyfer 2019–20: Trafod yr adroddiad drafft**  
(11.20–11.50) (Tudalennau 49 – 66)  
Papur 3 – Adroddiad drafft (Saesneg yn unig)
- 8 Cyllideb Ddrafft Llywodraeth Cymru 2020–21: Ystyriaeth cyn y Gyllideb derfynol**  
(11.50–12.00) (Tudalen 67)  
Papur 4 – Adroddiadau'r Pwyllgorau Polisi ar Gyllideb Ddrafft 2020–21

## Cofnodion cryno – Y Pwyllgor Cyllid

Lleoliad:

Gellir gwyllo'r cyfarfod ar [Senedd TV](#) yn:

Ystafell Bwyllgora 3 – Y Senedd

<http://senedd.tv/cy/5981>

Dyddiad: Dydd Iau, 6 Chwefror 2020

Amser: 09.03 – 10.24

### Yn bresennol

Categori	Enwau
Aelodau'r Cynulliad:	Llyr Gruffydd AC (Cadeirydd) Siân Gwenllian AC Rhianon Passmore AC Nick Ramsay AC Mark Reckless AC Jenny Rathbone AC (yn lle Mike Hedges AC)
Tystion:	Julie James AC, Y Gweinidog Tai a Llywodraeth Leol Claire Germain, Llywodraeth Cymru Cath Wyatt, Llywodraeth Cymru Lisa James, Llywodraeth Cymru
Staff y Pwyllgor:	Bethan Davies (Clerc) Leanne Hatcher (Ail Clerc) Samantha Williams (Dirprwy Clerc) Owen Holzinger (Ymchwilydd)



## **1 Cyflwyniad, ymddiheuriadau, dirprwyon a datgan buddiant**

- 1.1 Croesawodd y Cadeirydd yr Aelodau a'r tystion i'r cyfarfod.
- 1.2 Cafwyd ymddiheuriadau gan Mike Hedges AC ac Alun Davies AC.
- 1.3 Roedd Jenny Rathbone AC yn bresennol ar ran Mike Hedges AC.

## **2 Papur(au) i'w nodi**

- 2.1 Nodwyd y cofnodion.

## **3 Bil Llywodraeth Leol ac Etholiadau (Cymru): Sesiwn dystiolaeth 2**

3.1 Cafodd y Pwyllgor dystiolaeth gan Julie James AC, y Gweinidog Tai a Llywodraeth Leol; Cath Wyatt, Rheolwr Bil Llywodraeth Leol ac Etholiadau, Llywodraeth Cymru; Lisa James, Dirprwy Gyfarwyddwr Democratiaeth Llywodraeth Leol, Llywodraeth Cymru; a Claire Germain, Dirprwy Gyfarwyddwr Trawsnewid a Phartneriaethau, Llywodraeth Cymru.

## **4 Cynnig o dan Reol Sefydlog 17.42 i benderfynu gwahardd y cyhoedd o weddill y cyfarfod**

- 4.1 Derbyniwyd y cynnig.

## **5 Bil Llywodraeth Leol ac Etholiadau (Cymru): Trafod y dystiolaeth**

- 5.1 Trafododd y Pwyllgor y dystiolaeth a ddaeth i law.

## **6 Trafod Cyllideb Atodol Comisiwn y Cynulliad 2019–20**

- 6.1 Nododd y Pwyllgor Gyllideb Atodol Comisiwn y Cynulliad ar gyfer 2019–20.

## **7 Trafod Cyllideb Atodol Swyddfa Archwilio Cymru 2019–20**

- 7.1 Trafododd y Pwyllgor ail gais Swyddfa Archwilio Cymru ac Archwilydd Cyffredinol Cymru ynglŷn â chyllideb atodol a'i nodi.

# Cofnodion cryno – Y Pwyllgor Cyllid

Lleoliad:

Gellir gwyllo'r cyfarfod ar [Senedd TV](#) yn:

Ystafell Bwyllgora 1 – Y Senedd

<http://senedd.tv/cy/5987>

Dyddiad: Dydd Mercher, 12 Chwefror

2020

Amser: 09.31 – 10.57

## Yn bresennol

Categori	Enwau
Aelodau'r Cynulliad:	Llyr Gruffydd AC (Cadeirydd) Siân Gwenllian AC Mike Hedges AC Rhianon Passmore AC Nick Ramsay AC Mark Reckless AC
Tystion:	Rebecca Evans AC, Y Gweinidog Cyllid a'r Trefnydd Sharon Bounds, Llywodraeth Cymru Matthew Denham-Jones, Llywodraeth Cymru
Staff y Pwyllgor:	Bethan Davies (Clerc) Leanne Hatcher (Ail Clerc) Samantha Williams (Dirprwy Clerc) Martin Jennings (Ymchwilydd)



## **1 Cyflwyniadau, ymddiheuriadau, dirprwyon a datgan buddiannau**

1.1 Croesawodd y Cadeirydd yr Aelodau a'r tystion i'r cyfarfod.

1.2 Cafwyd ymddiheuriadau gan Alun Davies AC.

## **2 Craffu ar Ail Gyllideb Atodol Llywodraeth Cymru ar gyfer 2019–20**

2.1 Clywodd y Pwyllgor dystiolaeth gan Rebecca Evans AC, y Gweinidog Cyllid a'r Trefnydd; Sharon Bounds, Pennaeth Rheoli Cyllidebau a Pholisi Ariannol, Llywodraeth Cymru; a Matthew Denham-Jones, Dirprwy Gyfarwyddwr Rheolaethau Ariannol, Llywodraeth Cymru.

## **3 Cynnig o dan Reol Sefydlog 17.42 i benderfynu gwahardd y cyhoedd o weddill y cyfarfod**

3.1 Derbyniwyd y cynnig.

## **4 Ail Gyllideb Atodol Llywodraeth Cymru ar gyfer 2019–20: Trafod y dystiolaeth**

4.1 Trafododd y Pwyllgor y dystiolaeth a ddaeth i law.

## **5 Trafod y flaenraglen waith**

5.1 Trafododd y Pwyllgor ei flaenraglen waith.



Ein cyf MA-L/JM/0246/20

Llŷr Gruffydd AC  
Cadeirydd  
Pwyllgor Cyllid

11 Chwefror 2020

Annwyl Llŷr,

Hoffwn ddiolch unwaith eto i aelodau'r Pwyllgor Cyllid a roddodd o'u hamser a'u harbenigedd i graffu ar y Bil Plant (Diddymu Amddiffyniad Cosb Resymol) (Cymru) yn ystod taith lwyddiannus y Bil drwy'r Senedd.

Rwyf wedi bod yn gwbl ymrwymedig i ddarparu, mor gywir â phosibl, yr amcangyfrifon gorau o'r costau sy'n gysylltiedig â'r Bil. Cyn cyflwyno'r Bil, aethom ati i archwilio data a gyhoeddwyd yn y DU ac yn rhyngwladol ac rydym wedi gweithio'n ddiwyd gydag amrywiaeth o randdeiliaid, gan gynnwys rhanddeiliaid o wledydd eraill sydd wedi cyflwyno deddfwriaeth debyg. Hyd y gwn i, nid oes yr un genedl arall wedi gwneud cymaint i bennu'r effaith neu'r gost bosibl cyn deddfu i wahardd cosbi plant yn gorfforol.

Yn dilyn argymhellion gan eich Pwyllgor, roeddwn yn falch o allu rhoi rhagor o fanylion yn y Memorandwm Esboniadol a osodwyd gerbron y Senedd ym mis Ionawr. Roedd hyn yn cynnwys darparu amcangyfrifon gorau ar gyfer costau nad oedd yn hysbys o'r blaen. Mae hyn wedi bod yn bosibl o ganlyniad i'r gwaith caled sy'n cael ei wneud gan a chyda ein partneriaid drwy ein grwpiau gweithredu.

Fel y noda'r Pwyllgor yn eich llythyr dyddiedig 27 Ionawr, mae llawer o'r costau ychwanegol a amlinellir yn y diweddariad o'r Memorandwm Esboniadol wedi codi oherwydd ein bod wedi derbyn yr argymhellion a wnaed yn Adroddiad Cyfnod 1 y Pwyllgor Cyllid neu drwy ystyried materion a godwyd yn ystod gwaith y Senedd o graffu ar y Bil.

Gallaf eich sicrhau ein bod yn gweithio'n agos gyda rhanddeiliaid, gan gynnwys drwy ein grwpiau gweithredu, i gynllunio'r dull mwyaf effeithiol ac effeithlon o gasglu data a monitro effaith y deddfwriaeth ar wasanaethau a sefydliadau perthnasol.

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:  
0300 0604400

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[Correspondence.Julie.Morgan@gov.wales](mailto:Correspondence.Julie.Morgan@gov.wales)

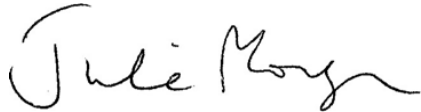
Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Nodwn eich pwynt o ran amseru'r Penderfyniad Ariannol ar gyfer Biliau, gan y gall y costau gynyddu'n sylweddol yn ddiweddarach o ganlyniad i ddiwygio Bil (diwygiadau llywodraethol ac anllywodraethol). Fel y sylweddolwch, mae'r amseru wedi'i nodi yn y Rheolau Sefydlog, felly nid yw'n fater y gall Llywodraeth Cymru ei newid.

Diolch i chi unwaith eto am y gwaith a wnaed gan y Pwyllgor. Byddaf yn parhau i roi gwybod i'r Senedd am waith y Grŵp Gweithredu Strategol, gan gynnwys unrhyw wybodaeth bellach am gostau posibl.

yn gywir

A handwritten signature in black ink that reads "Julie Morgan". The signature is written in a cursive, flowing style.

**Julie Morgan AC/AM**

Y Dirprwy Weinidog Iechyd a Gwasanaethau Cymdeithasol  
Deputy Minister for Health and Social Services



## **Response to the National Assembly for Wales' Finance Committee's Inquiry into the impact of variations in national and sub-national income tax**

This is a response by David Phillips, an Associate Director at the Institute for Fiscal Studies (IFS). The views and opinions here are those of the author only; the IFS has no corporate views. The response does not seek to provide an exhaustive review of the evidence, but instead highlight key conceptual and empirical evidence, and relate these to the Welsh context (including the specific form of partial tax devolution in place).

### **Background: the Welsh Rates of Income Tax**

Income tax is partially, not fully devolved to Wales. In particular, the tax rates set by the UK government are reduced by 10 percentage points (to 10%, 30% and 35%) for non-savings non-dividends (NSND) income. The Welsh Government has the power to levy tax rates on top of these (reduced) UK government tax bands, and has so far chosen rates of 10% in each case (so that the total income tax rates of 20%, 40% and 45% remain the same as in England and Northern Ireland). The fact that the Welsh Government receives revenue only from its 10 percentage points of each band, and its rates apply to NSND income only has important implications for the revenue effects of behavioural responses to taxation.

### **Evidence on the responsiveness to changes in and variations in income tax**

A summary measure of how responsive people are to income tax rate is the elasticity of taxable income or ETI. It measures the percentage change in reported taxable income when the share of each £1 someone keeps after tax changes by 1%. It is typically positive – people report more taxable income when they get to keep more of each pound – and larger values mean people are more responsive. A given elasticity can capture both “real” responses to taxation such as changes in how much and how hard people work and whether they migrate or not, as well as effects on tax avoidance and evasion. The nature of the response can matter for the economic and revenue effects of changes in income tax rates.

A large number of studies seek to estimate the ETI for different population groups in different countries – although there are none for Wales specifically, and only a relatively small number focused on sub national income taxes.

Key findings of this literature<sup>1</sup> are:

1. High income taxpayers have higher ETIs than middle and low income taxpayers, potentially reflecting the greater scope they have to make use of tax avoidance mechanisms or migrate to other jurisdictions, and perhaps the greater role of effort/performance (as opposed to hours of work) in determining their income.

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<sup>1</sup> A review of work up until around 2010 can be found in Saez, E., Slemrod, J., and Giertz, S. H. (2012), 'The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review', *Journal of Economic Literature*, Vol, 50, No. 1, pp 3 – 50. Recent evidence from the UK includes two studies by authors at the IFS: Browne and Phillips (2017), available at <https://www.ifs.org.uk/publications/9675>; and Miller, Pope and Smith (2019), available at <https://www.ifs.org.uk/publications/14475>.

2. Responsiveness seems to be especially high for particular sub-sets of high income people like star inventors and professional sports people, where the labour market is global, and where there is therefore more opportunity for migration responses.
3. Those approaching retirement are generally more responsive to changes in income tax rates than those earlier in their careers. This may reflect the fact that older people have an additional margin of response – retirement –, while younger people have an incentive to be in the workforce to maintain and build up experience.
4. Capital income (esp. dividends income) is much more responsive to changes in income tax rates than labour income (a large majority of NSND income). In principle this could reflect those individuals who have significant capital income being more responsive than those who do not. In practise though, much of this seems to be due to the fact that there are more opportunities to avoid taxation of capital income – especially by retaining income within a business and taking advantage of lower tax rates later (especially on capital gains).
5. When changes in tax rates apply to some forms of income but not others, responses tend to be especially large if taxpayers have scope to change the form of income in which they take their remuneration. For example, company owner-managers could take more of their income in dividends or capital gains, if taxes are increased on NSND income – and employees and self-employed individuals could incorporate to take advantage of these opportunities.
6. The migration decisions of foreigners are more responsive to taxation than the migration decisions of native-born citizens. This may reflect the latter being more likely to have long standing ties to an area (e.g. family, culture), which means that the “cost” of moving in response to changes or differences in tax rates are larger than for foreigners.
7. Estimated ETIs are often larger for “big” reforms than for “small” reforms. This does not just mean that people respond more to larger reforms. It means that estimated elasticities are often bigger, i.e. the percentage change in taxable income *for each* percent change in the share of each £ someone retains after tax is bigger. This is one of several pieces of evidence which suggest people face significant costs on responding to changes or differences in tax rates that attenuate their responsiveness, especially in the short term. For example, for migration responses, these costs include the physical cost of moving (e.g. costs of buying/selling houses), information costs (e.g. on where taxes are lower, on where and which jobs are available), and psychological costs (e.g. missing family and friends). For avoidance it includes the effort and cost of seeking professional advice and taking decisions based on this. Given these costs it may only be worth making the effort to respond at all once tax changes/differentials are a sufficient size – although what that size is is likely to be very context specific. It may be lower where one has to move less far to avoid a tax, for instance – because it might be easier to find out information about properties and jobs (or even keep the same job), still see family and friends regularly, etc. And it may be lower for those already in receipt of professional advice on their tax affairs.

### **Evidence on responsiveness to variation in sub-national income taxes**

As discussed, a number of papers look specifically at responsiveness of taxpayers to changes in and variation in sub-national income taxes. A related literature looks at migration responses to taxation – although many of these look at national, rather than sub-national income tax.<sup>2</sup>

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<sup>2</sup> See [http://econ.lse.ac.uk/staff/clandais/cgi-bin/Articles/JEP\\_Mobility.pdf](http://econ.lse.ac.uk/staff/clandais/cgi-bin/Articles/JEP_Mobility.pdf).

Some studies find relatively little effect of variations in sub-national taxes on behaviour and hence tax bases. For example, Yang and Heim (2017)<sup>3</sup> find that counties' tax bases in Indiana, USA, were unaffected by the tax rate charged by the county in the period 1997 and 2013: the estimated ETI is 0.06, which is not statistically significant. However, the levels and changes in tax rates used for identifying these effects are small – about 0.3%. As discussed above, adjustment costs may mean the responses to such small tax changes are attenuated, especially in the short run, leading to downwardly biased estimates of the scale of response to larger differences. However, Bruce, Fox, and Yang (2010) look at the effect of state-level income taxes on state tax bases in the USA and find similar results for states, where tax rate changes are larger. And while Gius (2011) finds state-level taxes have a statistically significant impact on migration for most demographic groups in the US, the magnitude of those effects is relatively modest. Moreover, Young and Varner (2011) find little evidence of migration responses among millionaires in New Jersey when the state income tax was increased, with retirees and those relying on capital (as opposed to earned) income being more responsive than average.<sup>4</sup>

A number of other studies find larger responses though – especially for subsets of the population. For example, Moretti and Wilson (2017) and Akcigit et al (2018) show that star scientists and inventors in the US are highly responsive to state income (and corporate income) tax rates. They argue this is important as there are more likely to be positive spillovers from this type of high income individual – although this is an untested assertion. Follow-up work by Zhang and Hewings (2019) suggest that scientists in the US are more responsive to larger changes in tax rates – perhaps reflecting the adjustment costs issue discussed above.<sup>5</sup>

Agrawal and Foremny (2019) find that high income taxpayers in Spain are highly responsive to sub-national income taxes, with an estimated elasticity of 0.85 for the number of top income taxpayers in a region. However, at the rates charged by regions, even with this relatively large response, the mechanical increase in tax revenue when rates are increased is larger than the loss as a result of migration out of the region.

Evidence from Switzerland is mixed, with some studies suggesting little migration response (Liebig and Sousa-Poza)<sup>6</sup>, while others suggest significant responses and hence substantial tax competition between Swiss Cantons (Feld and Kirchgassner), especially for higher income residents.<sup>7</sup> One study also suggests that young graduates are more responsive than the wider population (Liebig et al)<sup>8</sup>.

Evidence from Scandinavia is also mixed, but suggests that decisions on whether to migrate relatively short distances may be more affected by tax competition – as the adjustment costs may be smaller, because people can keep the same job.

### **Implications for Wales**

There are several lessons for Wales, despite the mixed evidence on how responsive migration decisions are to variation and changes in sub-national income taxes:

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<sup>3</sup> See [http://www.ntanet.org/NTJ/70/2/A05\\_Yang.pdf?v=%CE%B1](http://www.ntanet.org/NTJ/70/2/A05_Yang.pdf?v=%CE%B1).

<sup>4</sup> See <http://web.stanford.edu/~cy10/public/NTJ-millionaire-migration-state-taxation.pdf>.

<sup>5</sup> See <https://link.springer.com/article/10.1007/s00168-019-00902-5>.

<sup>6</sup> See <https://academic.oup.com/cje/article-abstract/30/2/235/1730009>.

<sup>7</sup> See <https://www.sciencedirect.com/science/article/abs/pii/S0166046200000843>.

<sup>8</sup> See <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-9787.2007.00529.x>.

1. Responsiveness to taxes, both in terms of migration and other behaviour (such as avoidance) is likely to be greater for high income individuals than for the rest of the population. The empirical evidence on this is what has led both HMRC (and the OBR) and the Scottish Government (and Scottish Fiscal Commission) to use substantially higher ETIs for people subject to the additional rate of income tax than for the higher and basic rates, when analysing and making tax policy decisions. Such an approach makes sense for Wales too.
2. While the appropriate *ranking* for scale of ETIs is fairly clear, it is less clear what should be assumed about the absolute size of ETIs. The HMRC and the OBR typically assume an ETI of about 0.45 for people subject to the additional rate of income tax rate. The Scottish Government and Fiscal Commission assume a similar value, effectively assuming that factors that could mean the appropriate ETI assumption for the Scottish Rates of Income Tax (SRIT) are higher or lower than for the UK rates offset each other:
  - a. On the one hand, the fact that the SRIT and the WRIT apply only to NSND income, which is generally found to be less responsive to changes in tax rates (potentially because of less opportunity to avoid tax on this type of income), would tend to suggest the ETI would be lower for devolved income tax and UK income tax.
  - b. On the other hand, the fact that devolved income applies only to NSND income means changes in devolved tax rates lead to changes in the relative taxes on NSND and savings and dividends income. This offers an additional margin of response – shifting income between these forms – which would tend to lead to a higher ETI.
  - c. And, one might expect that people are more likely to be migrate between constituent parts of the UK (especially where the distances involved are relatively small, such as in border areas, which are relatively densely populated in the case of England and Wales) than to migrate between the UK and overseas. This would again suggest a higher ETI for changes in devolved income taxes.
  - d. But, the characteristics of high earners in Wales – more likely to work in the public sector, less likely to be foreign – could offset at least part of this.

Ultimately, until there is analysis of variation in income tax between Wales and England, there will be very significant uncertainty about just how these factors interact to determine the responsiveness of the Welsh income tax base (and even then, identifying the effects of differences in income tax per se, in the context of many other economic and policy differences will be a difficult task). If there are income tax policy changes in Wales, the Welsh Government should consider commissioning research on its impacts – covering a period of several years to look at short and longer-term responses. But, in the meantime, starting from the assumptions used by HMRC/OBR and SG/SFC would be reasonable.

3. It is important to note though, that unless migration responses are very large indeed, the set-up of income tax devolution in Wales means that it is very highly likely that increases in tax rates, even the additional rate, would increase Welsh Government revenues.<sup>9</sup> Conversely, reductions in tax rates would reduce revenues, unless behavioural responses were very large. This is because whilst the Welsh Government gains or loses the full ‘mechanical’ effect of the tax rate change, it only bears a portion of the behavioural effect.

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<sup>9</sup> The Wales Governance Centre have previously calculated how large migration responses would have to be to offset the increases (decreases) in revenue as a result of a tax increase (cut). I believe they will be updating these figures for their submission to this inquiry.

For instance, consider the case of an increase in the WRIT applied to the additional rate band from 10% to 11%. The Welsh Government would retain all the extra revenue raised from increasing that rate from 10% to 11%. But if the tax base fell, it would only bear the share of that fall that relates to its 11 percentage points of income tax; the impact on the UK government's 35 percentage points of income tax on this tax band in Wales would be borne by the UK government. This means it is much less likely that reductions in revenues from the falls in the tax base would be big enough to offset the increased revenues as a result of the higher tax rate than if all income tax revenues and rates were devolved to Wales.

This means compared to a situation in which income tax were fully devolved to Wales, increases in income tax rates are relatively more attractive (and decreases relatively less attractive) from a revenue perspective.

4. Of course, when making tax policy decisions, it is not just the effects of those decisions on revenues that the Welsh Government would want to consider. An increase in the additional rate of tax might yield revenue due to the fact the Welsh Govt bears only a portion of the migration and avoidance effect on the size of the Welsh tax base. But the Welsh Govt may still decide it does not want to do this if it is concerned with the welfare of additional tax rate payers appropriately, or it thinks there could be spillovers on the wider Welsh population (e.g. lower wages or fewer employment opportunities) if there is a reduction in the number of additional rate taxpayers in Wales. Any research commissioned in future would likely want to consider spillover effects on the wider Welsh population – although these can be difficult to identify empirically.
5. The scale of response to a significant change in tax rates could be more than proportionally bigger than the scale of response to a small change in tax rates. For example, one might expect a 5 percentage point change in tax rates to lead to a more-than 5 times as large a response as a 1 percentage point change in tax rate. This is because adjustment costs can attenuate the responses to small changes or differences in tax policy. This means that the scope for learning how taxpayers may respond to a big tax change from how they responded to a small tax change may be limited. This should be recognised in any future research.

Mae cyfyngiadau ar y ddogfen hon

# Modelling behavioural responses to changes in Welsh Rates of Income Tax

Written evidence submission to National Assembly for Wales' Finance Committee inquiry into 'Impact of variations in national and sub-national income tax'

# Modelling behavioural responses to changes in Welsh Rates of Income Tax

22 JANUARY 2019

1. This evidence submission draws upon relevant sections from our 2018 report, *The Welsh Tax Base: Risks and Opportunities after Fiscal Devolution*, with updated modelling results.<sup>1</sup> We focus on assessing the monetary impact on devolved income tax revenues of varying levels of tax rate divergence.
2. Our main findings are:
  - a. The extent and effects of behavioural change to be expected is highly uncertain, though it must be considered when setting income tax policy. High income earners are assumed to be the most responsive to income tax rate changes, because they have the largest incentive and the greatest means to change their behaviour in response to tax policy.
  - b. Since only a portion of income tax is devolved, the Welsh Government would be relatively shielded from the behavioural response of taxpayers if it decided to change income tax rates. For example, a 1p increase in the basic rate would raise around £190 million in revenue in the absence of a behavioural response; this additional revenue would reduce only marginally to £186 million even under an assumption of large behavioural responses to changes in marginal tax rates.
  - c. Taxpayers may also decide to migrate to and from Wales as a result differences in average income tax rates. There is some evidence that differences in tax rates within a country can encourage taxpayers to relocate or shift income between jurisdictions, though Wales' circumstances make it hard to draw conclusions from other countries. We therefore present estimates of the migration levels required for the revenue effect of a tax change to reverse (e.g. for inward migration of taxpayers to offset the cost of a tax cut). Migration by Additional Rate taxpayers (those earning over £150,000 a year) has the highest likelihood of materially affecting the revenue effects of Welsh Government tax rate changes.
  - d. It would take a substantial migration response from very high earners to have a material positive budgetary effect if the additional rate was cut by 5p in Wales. If 1,100 taxpayers relocated the cost of the tax cut would reduce to zero, while a doubling of Wales' share

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<sup>1</sup> Ifan and Poole (2018), available at: [https://www.cardiff.ac.uk/\\_data/assets/pdf\\_file/0008/1287008/The-Welsh-Tax-Base- WCPP-Final-180627.pdf](https://www.cardiff.ac.uk/_data/assets/pdf_file/0008/1287008/The-Welsh-Tax-Base- WCPP-Final-180627.pdf)



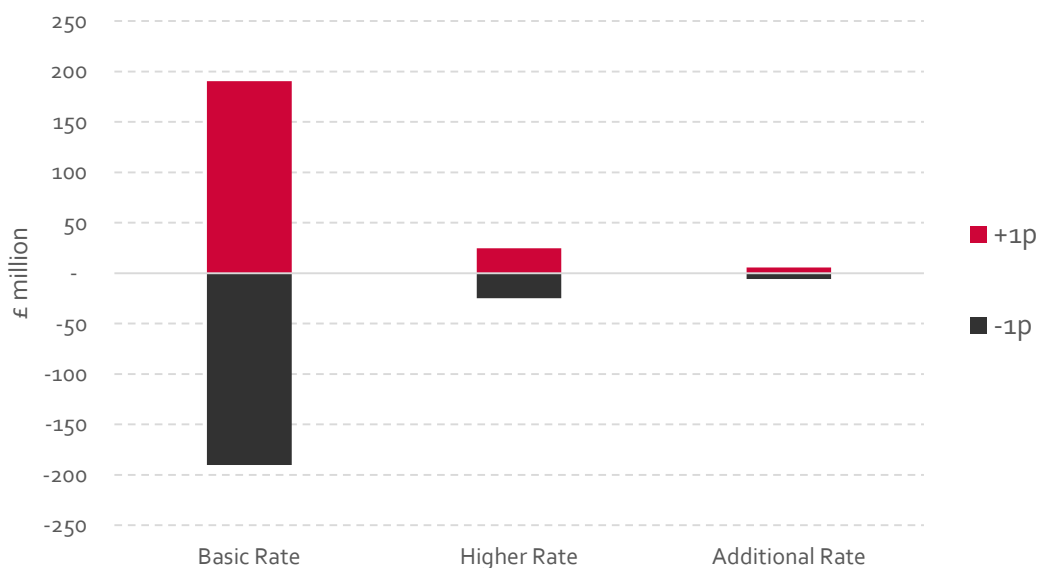
of UK additional rate taxpayers (with over 6,000 migrating) would boost the Welsh budget by approximately £129 million.

## Setting income tax rates in Wales

- From April 2019, UK Government income tax rates for Welsh taxpayers decreased by 10p in the pound, allowing the Welsh Government to set its own income tax rates in each band. Varying tax rate away from 10p in each band will have a direct effect on the Welsh Government budget, as well as potentially changing the behaviour of Welsh taxpayers.
- As can be seen from **Figure 1**, by far the largest revenue effect would result from a change in the basic rate in Wales; a 1p change in 2020-21 would increase or decrease the Welsh budget by approximately £190 million. Varying the higher and additional rates would result in a smaller increase or decrease in tax receipts and affect fewer taxpayers.

**Figure 1**

Revenue effect of changing each rate by 1p in the pound, with no behavioural response



Source: Office for Budget Responsibility (2019) and authors' calculations

- The Welsh Government tax rates will apply to taxable earned income determined by UK Government allowances, thresholds and reliefs. This restriction limits some of the scope for innovative income tax policy, such as the significant restructuring of Scottish tax bands that came into force in April 2018.

## Behavioural response to a tax rate change

6. Were the Welsh Government to change income tax rates in Wales, there would likely be some behavioural response from Welsh taxpayers. Possible behavioural responses include greater use of tax planning, tax avoidance or evasion, individuals seeking different jobs or changing the number of hours worked, and/or migration into and out of Wales. The extent and effects of behavioural change to be expected is highly uncertain, though it must be considered when setting income tax policy.
7. High-income earners are assumed to be the most responsive to income tax rate changes, because these taxpayers have the largest incentive and the greatest means to change their behaviour in response to tax policy. Although the Welsh tax base is less dependent on the incomes of high-earners compared with the rUK, such earners will account for a large share of the Welsh Government's income tax revenue. The top one per cent of taxpayers in Wales will contribute over 10% of devolved income tax revenue (more than the lowest-earning 40 per cent of taxpayers), and the top 10 per cent will contribute more than the lowest-earning 70 per cent (Ifan and Poole 2018: 22).
8. Although HM Treasury varied income tax rates on incomes over £150,000 in 2010 and 2012 (firstly from 40p to 50p, then to 45p), estimates of the revenue effects of these change are still highly uncertain, because of the significant forestalling of incomes in response to the changes being pre-announced. Forthcoming change in Scottish income tax rates may provide further evidence of taxpayer behavioural response in a devolved setting, though relevant detailed income tax data will not be available for some time.
9. In the academic literature, the extent of behavioural change in response to tax changes are often captured by estimated Taxable Income Elasticities (TIEs). TIEs are an estimate of the percentage change in total taxable incomes in response to a one per cent change in the net-of-tax rate (the share of income retained after tax). Available evidence suggests a very broad range of TIEs, which vary by income levels, time, type of policy change and country (see table 4.2 of Scottish Fiscal Commission 2018).
10. As an initial exploration of the Welsh Government's income tax policy options, **Figure 2** presents the revenue effect of changing each Welsh Government tax rate away from 10p in the pound in 2020-21, using a micro-simulation model outlined in Ifan and Poole (2018), updated for a later year. Our central estimate for the behavioural response of taxpayers uses a different assumed TIE for taxpayers at each marginal rate; namely 0.1 for basic rate taxpayers, 0.2 for higher rate taxpayers, and 0.5 for additional rate taxpayers. These closely match the assumed TIEs used by the Scottish Fiscal Commission (2018) in their income tax forecasts for Scotland. An alternative estimate assuming a larger behavioural response uses TIEs towards the upper end of estimate from available studies. These TIEs capture behavioural change in response to change in the **Marginal Effective Tax Rate** faced by the taxpayer (i.e. how much of a £1 rise in gross earnings is lost in tax).

11. The estimate presented in **Figure 2** demonstrate that the Welsh Government would be relatively shielded from the behavioural response of Welsh taxpayers if it decided to change income tax rates. Note that the 'mechanical' effect of a tax rate change (with no behavioural change) are relatively close to the revenue effects that assume a behavioural response. For instance, a 1p increase at the basic rate would raise around £190 million in revenue in the absence of a behavioural response; these receipts would reduce only marginally to £186 million even under an assumption of large income elasticities.
12. While the Welsh Government would bear all the mechanical effect of a tax rate change, it would largely be insulated from much of the behavioural response, since only a portion of income tax is devolved. Any change in earned income because of a Welsh Government tax rate change would have a greater effect on UK government reserved revenue from income tax and national insurance contributions. For example, lowering the additional rate in Wales by 5p in the pound would cost the Welsh Government approximately £28 million (assuming no behavioural response). But any positive effect on the taxable earned income of high earners would primarily go to the UK government through higher income tax and NICs. Even assuming a high TIE, the estimate cost for the Welsh Government would still be around £26 million.
13. However, as well as responding to change in their marginal effective tax rates, taxpayers may also respond to changes in their average effective tax rate (the proportion of a taxpayer's total income which is paid in tax). This type of behavioural response includes leaving or entering employment, and importantly in Wales' case, **migration** to another tax jurisdiction. **Figure 2** also presents the change in tax liability for an average taxpayer at each marginal rate resulting from a Welsh Government tax change. The subsequent column shows how many taxpayers would need to migrate from Wales to the rUK (or vice versa) for the revenue effect of a given tax rate change to reverse.<sup>2</sup>
14. For example, a 5p increase in the higher rate of income tax would cost the average higher rate taxpayer in Wales £1,067, and it would take over 17,000 higher rate taxpayers in Wales to leave Wales to offset the additional £118 million raised by the tax change. Any change in the additional rate in Wales would have the largest effect on a taxpayers' average effective tax rate and hence present the largest incentive for migration for higher income earners. The required level of migration to offset the revenue effect of an additional tax rate increase is relatively small, but still significant in the context of the number of additional rate taxpayers in Wales.
15. In contrast to Scotland's devolved tax system, a distinctive feature of the Welsh model is that the UK government will not be able to respond in kind to a decision to cut income tax by the Welsh Government. Because any UK government tax cut will also apply in Wales (to the reserved portion of income tax), any differential between income tax rate in Wales and the rUK cannot close unless the Welsh Government so chooses.

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<sup>2</sup> It should be noted that the average tax rate faced by higher and additional rate taxpayers are also influenced by changes in the basic rate. Therefore, the migration effect to a basic rate cut could include taxpayers who are on higher marginal rates.

16. There is some evidence that differences in tax rate within a country can encourage taxpayers to relocate or shift their income between jurisdictions (as explored in other evidence submissions). However, migration responses are likely to be very context-specific, and Wales' particular circumstances make it hard to draw conclusions from other countries and tax jurisdictions.

**Figure 2**

Revenue effect of devolved income tax policy options in 2020-21

Welsh Government tax policy - change from 10p		Basic rate				Higher rate				Additional rate							
		Mechanical effect (£m)	With behavioural response (£m)		Difference in tax for average basic rate earner (£)	Migration required for revenue effect to be reversed	Mechanical effect (£m)	With behavioural response (£m)		Difference in tax for average higher rate earner (£)	Migration required for revenue effect to be reversed	Mechanical effect (£m)	With behavioural response (£m)		Difference in tax for average basic rate earner (£)	Migration required for revenue effect to be reversed	
			Central TIE=0.1	High TIE=0.2				Central TIE=0.2	High TIE=0.4				Central TIE=0.5	High TIE=0.75			
Tudalen y peiryn 29	+5p	951	936	919	566	551,439	123	118	113	1,067	17,018	28	24	21	4,810	830	
	+4p	761	749	737	453	473,185	99	95	91	854	14,088	23	20	17	3,848	694	
	+3p	571	563	555	339	382,892	74	71	69	640	10,939	17	15	13	2,886	544	
	+2p	381	376	371	226	276,787	49	48	46	427	7,563	11	10	9	1,924	380	
	+1p	190	188	186	113	151,391	25	24	23	213	3,921	6	5	5	962	199	
	No change	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	-1p	-190	-188	-186	-110	189,582	-25	-24	-23	-281	3,998	-6	-5	-5	-2,104	153	
	-2p	-381	-377	-374	-221	426,560	-49	-48	-47	-563	8,403	-11	-11	-10	-4,209	330	
	-3p	-571	-566	-559	-331	732,585	-74	-73	-71	-844	13,295	-17	-16	-15	-6,313	536	
	-4p	-761	-756	-748	-442	1,140,618	-99	-97	-95	-1,126	18,753	-23	-21	-21	-8,418	777	
-5p	-951	-946	-938	-552	1,712,990	-123	-122	-120	-1,407	24,856	-28	-27	-26	-10,522	1,062		

Note: average earnings for taxpayers in Wales used for tax increase calculations; average earnings for taxpayers in rUK used for tax decrease calculations. Changes from Table 4.1 in Ifan and Poole (2018:67) reflect latest data (Survey of Personal Income 2015-16) and changes in modelled tax thresholds.



17. An obvious factor will be the already large migration and commuting flows across the Welsh-English border outlined in section 3.4 of Ifan and Poole (2018). It is possible that the decisions of those already planning on moving may be influenced by income tax differentials. With several large English cities within commutable distance of the Welsh border, individuals who do not have to change jobs after moving may have a greater incentive to migrate to Wales to take advantage of lower tax rates. There are also a significant number of second homes in Wales and England which are owned by residents of the other country. Changing their primary residence to these addresses may allow some taxpayers to take advantage of lower income tax rate, without incurring the costs of relocation. These decisions would also be influenced by the second-home council tax premiums charged by some local authorities in Wales.
18. Converting income between dividend income (still taxed at the UK government rate) and earned income will also be an additional behavioural response available to some taxpayers. Taxpayers with total incomes over the additional rate threshold in Wales received around £200 million of dividend income in 2014-15. Tax-motivated incorporations have been increasing in recent years, and any income tax rate change in Wales may affect the relative trend in incorporations.

## Modelled effect of an additional rate cut in Wales

19. The estimates presented in Figure 2 suggests that any migration response from Additional Rate taxpayers will have a high likelihood of materially affecting the revenue effects of Welsh Government tax rate change. Since the UK government could not respond to a Welsh Government tax cut, it is worthwhile to consider the incentive the Welsh Government will have to abolish the additional rate in Wales, by implementing a 5p cut. While it is impossible to accurately predict the resulting migratory response, we can crudely calculate the revenue effect of a given hypothetical migratory response.
20. There are an estimated 435,000 additional rate taxpayers in the UK.<sup>3</sup> Only around 6,000 (1.4 per cent) of these taxpayers currently live in Wales. A third live in London, while another third live in the South East of England and the East of England. Around 66,000 are resident in the three regions of England which have borders with Wales, and around 78 per cent of the population of these regions live within 50 miles of the Welsh border.
21. We estimate that The average NS-ND income of taxpayers earning over £150,000 will be approximately £360,000 in 2020-21. The average additional rate taxpayer would therefore save over £10,500 per year through migrating in response to a Welsh Government tax cut. Assuming an offsetting positive behavioural response outlined above, our modelling suggests that reducing the additional rate in Wales would incur a budget cost to the Welsh Government of

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<sup>3</sup> HMRC (2019) Table 2.2 Number of income taxpayers, by country, Available at: <https://www.gov.uk/government/statistics/number-of-individual-income-taxpayers-by-marginal-rate-gender-and-age-by-country#history>

approximately £27 million in 2020-21. The cost of maintaining this tax cut would grow slowly over time as taxable income over the fixed additional rate threshold of £150,000 grows.

22. **Figure 3** presents projections of different levels of migration of additional rate taxpayers, and the estimated effect these would have on the Welsh Government budget. If around 407 taxpayers (0.1 per cent of rUK taxpayers with incomes over £150,000) migrate to Wales, the cost of the tax cut would fall to £17 million. If 1,100 average additional rate taxpayers migrated, the cost of the tax cut would reduce to zero, while a stronger migratory response would provide a boost for the Welsh Government budget. A substantial effect on the Welsh Government budget however would require a very strong migratory response. For example, if over 6,000 additional rate taxpayers migrated, then the Welsh Government budget would increase by £129 million. This would amount to a doubling of the share of UK additional rate taxpayers living in Wales.

### Figure 3

Modelling a 5p cut in the additional rate in Wales: revenue effects of varying migratory responses from additional rate (AR) taxpayers from the rest of the UK

Share of rUK AR taxpayers migrating to Wales	Number of AR taxpayers migrating to Wales	Number of AR taxpayers in Wales	Welsh share of all UK AR taxpayers	Budget effect of migratory response (£ million)	Budget change after tax cut (£ million)
0.0%	0	6,000	1.4%	0	-27
0.1%	407	6,407	1.5%	10	-17
0.5%	2,035	8,035	1.8%	52	25
1.0%	4,070	10,070	2.3%	104	77
1.5%	6,105	12,105	2.8%	156	129
2.0%	8,140	14,140	3.3%	208	181
2.5%	10,175	16,175	3.7%	260	233
3.0%	12,210	18,210	4.2%	312	285

Note: Changes from Table 4.2 in Ifan and Poole (2018) reflect updated estimates of Additional Rate taxpayers and their incomes.





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