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Abstract:

This paper proposes the use of LLMs to help code the progressivity of tax policies and thereby examine whether the tax policy-making process exhibits a bias towards the affluent. We construct a database that matches tax policy proposals in party manifestos to tax policies actually implemented, drawing on OECD Economic Surveys for Germany and the UK from the late 1990s to the 2020s. We code the progressivity of each tax pledge and each implemented tax policy using semi-automated methods. Our results suggest a post-electoral bias towards the affluent: The share of regressive tax policies is around 10pp larger among implemented policies than among those in the manifesto.

1 Introduction

Across a large set of affluent democracies, recent literature has shown that policy output is more closely aligned with the preferences of better-off citizens than with those of the less well-off (Gilens 2014; Bartels 2008; Mathisen et al. 2023; Schakel 2021; Persson 2020). The typical approach is to match survey-based preferences for policy change to subsequent policy outputs. Results show that citizens in the bottom of the income distribution receive, at best, coincidental representation, namely when their preferences overlap with those of more affluent groups (Gilens and Page 2014). However, the literature has not yet adequately explained the mechanisms that drive this bias. Recent evidence suggests that the bias is not generated during the electoral process (Lindqvist et al. 2025), but there is to date no evidence that it actually emerges in the post-electoral process.

This paper proposes the use of LLMs to help code tax reforms in order to estimate biases in the post-electoral process of tax policy-making. We estimate the bias in the

post-electoral process of tax policy-making by comparing the progressivity of actually implemented tax reforms to the progressivity of tax reforms proposed in the party manifestos of the winning coalition. This essentially tells us whether there is a bias between what voters vote on and what actually happens.

We code the progressivity using a semi-automated procedure that combines LLM-based coding with human coding by a tax lawyer and several researchers. Our procedure to code tax reforms has several building blocks. First, we extract snippets on tax reforms from OECD Economic Surveys and from party manifestos. Second we use LLMs to extract an "information package" on each reform, using only trusted sources on legislation. Third we use LLMs a second time to code in an open-ended manner the specific group that is affected by the reform. This is a relatively "objective" quantity that directly flows from the specifics of the reform. Fourth, we use the information on the specific affected group to manually code the progressivity of each reform. For this, we make use of secondary sources and rely on some specific assumptions to assess where in the distribution the specific affected group is in the income distribution.

We apply this procedure to UK and German governments from the late 1990s to the 2020s. Our results for these cases suggest a post-electoral bias towards the interests of affluent citizens: implemented tax reforms are around 10pp more likely to be regressive than the reforms proposed in the manifestos of the corresponding winning coalitions.

2 Data

2.1 Structure of the Data

Our dataset covers tax pledges and tax policies in the United Kingdom and Germany across multiple government terms from the late 1990s to 2020s. For the purposes of the current analysis, we focus on seven UK government terms (Labour 1997–2001, Labour 2001–2005, Labour 2005–2010, the Conservative–Liberal Democrat coalition 2010–2015, and the Conservative governments of 2015–2017, 2017–2019 and 2019–2024) and seven German government terms (the SPD–Green coalitions of 1998–2002 and 2002–2005, the CDU/CSU–SPD coalitions of 2005–2009, 2013–2017 and 2017–2021, the CDU/CSU–FDP coalition of 2009–2013, and the SPD–Green–FDP coalition of 2021–2025). The sample includes 174 tax pledge observations and 205 implemented tax policy observations for the UK, and 378 tax pledge observations and 208 implemented tax policy observations for Germany. In addition, 161 pledges (90 in the UK and 71 in Germany) were fulfilled without a corresponding entry in the OECD surveys, because they were commitments to leave a tax unchanged; these are also counted as implemented in the analysis, giving 295 implemented observations for the UK and 279 for Germany.

For both the tax pledges and the OECD tax policy data, the unit of analysis is the individual tax reform snippet. Each snippet captures two core elements: the object of

the reform (typically a specific tax component, e.g., the basic rate of personal income tax) and the nature of the change (typically an increase or decrease).[1]

The main outcome variable is *progressivity*, coded as a binary indicator (progressive / regressive) for each tax pledge or implemented tax reform snippet. The progressivity variable depends on a series of intermediate parameters coded prior to it, most notably the specific tax component that was reformed and the specific group that was affected by the reform.

The manifesto and OECD data are then merged at the snippet level: each tax pledge is matched to the implemented tax policies that correspond to it, producing a fulfillment indicator for each pledge. The matching is one-to-many: a single pledge may match zero, one, or several implemented policies.

Table 1 presents a small selection of observations from the dataset, illustrating key variables for both pledge and policy snippets.

[1] Original snippets derived from OECD surveys sometimes refer to multiple interrelated reforms within a single passage. In such cases, we disaggregate the original snippet into separate clean snippets, each containing exactly one tax reform. For example, a snippet mentioning both an increase in the basic rate and a rise in the basic allowance of personal income tax is split into two distinct observations.

Table 1: Example of Coding and Merging of Tax Pledges and Policies

Manifesto Snippet	**Precision**	**Matched OECD Snippet**	**Component Detail**	**Direction**	**Affected Group Specific**	**Affected Group Broad**	**How Affected**	**Progressivity**
"*Our long-term objective is a lower starting rate of income tax of 10 pence in the pound*" (Labour Party Manifesto 1997, p. 355).	specific	"*From April 1999, a new 10 per cent rate was introduced*" (OECD Economic Survey: UK 2000, p. 71)	starting rate of personal income tax	new/introduced	individual taxpayers with taxable income within the first £1,500 band above the personal allowance	bottom_middle	better-off	progressive
"*We want a tax regime that supports British business*" (Labour Party Manifesto 2005, p. 17)	broad	"*The introduction of a zero tax rate for companies with less than £10 000 of taxable profit*" (OECD Economic Survey: UK 2007, p. 142)	starting rate of corporation tax	decrease	owners/shareholders of companies with taxable profits less than £10,000 (not associated company)	middle_top	better-off	regressive
		"*Budget 2007 announced more generous R&D tax credit system for SMEs*" (OECD Economic Survey: UK 2007, p. 56)	enhanced deduction rate for qualifying SME R&D expenditure	increase	owners/shareholders of SME companies	middle_top	better-off	regressive

Note: The table displays selected snippets and variables for illustrative purposes.

2.2 Dataset Construction

We constructed the dataset in three sequential stages: extraction, coding, and merging. We documented each stage with detailed written guidelines and procedures developed prior to data collection (see Appendix 2). In each stage, we ran a preparatory phase involving several rounds of: pilot studies, double coding by multiple researchers, and refinement of the codebook and guidelines, in an iterative process.

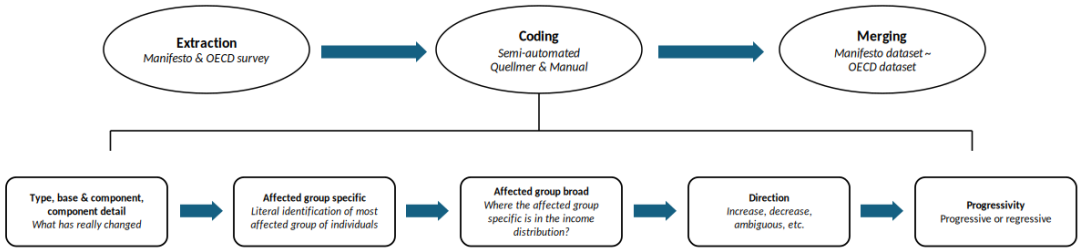

Figure 1: Mapping of Construction of the Dataset

2.2.1 Extraction of Snippets

Following the electoral pledges literature, we define *tax pledges* as party commitments for tax reforms that are prospective and testable - that is, specific enough that their fulfillment or non-fulfillment can be assessed (Naurin and Thomson 2020, 292). A tax pledge involves a measurable or estimable future change in taxation that can be enacted through national legislation.

We further classified extracted pledge snippets along a specificity dimension:

- *Specific* pledges clearly identify the tax type, base, component, and affected group, and can be fulfilled in only one way. An example of this would be: "We will not raise the basic or top rate of income tax and extend the 10p band" (Labour Party Manifesto, 2001, p. 6).
- Non-specific (*moderate* and *broad*) pledges may be fulfilled in more than one way. *Moderate* pledges explicitly refer to tax reform but leave the details unclear, such as: "We will review the corporate…tax regimes to see how the tax system can promote greater long-term investment" (Labour Party Manifesto, 1997, p. 356). And *broad* pledges are potential reforms for which implementation through taxation is probable but not explicitly stated, such as "We will support hybrid and fuel cell vehicles, which already offer a halving of fuel consumption and CO2

emissions, with cheaper motoring to match - and for cleaner fuels and biofuels" (Labour Party Manifesto 2001, p. 41).

This specificity classification has consequences for both merging and interpretation of results, as discussed below.

2.2.2 Coding

We apply a multi-step procedure to code a reform as progressive or regressive.

2.2.2.1 Coding Tax Components and Affected Group

We code the tax *type*, *base*, *component*, *component detail*, *specific change*, *direction*, and *affected group specific* variables semi-automatically using two custom R packages: Ellmer and Quallmer.

The package Ellmer retrieves an information package for each reform from trusted online sources (Table 2). Legislation sources consulted include: legislation.gov.uk, hansard.parliament.uk, gov.uk, parliament.uk, bundesfinanzministerium.de, gesetze-im-internet.de, bundesgesetzblatt.de, and bundestag.de, as well as oecd.org and imf.org.

We also use the Ellmer package to gather existing information on studies on the distributional incidence of the tax reforms, if available. For this, Ellmer consults the output of research centers specializing in distributional policy analysis, including ifs.org.uk, diw.de, ifo.de, and zew.de.

Table 2: Example of Ellmer Information Package

Snippet	Ellmer information package
The basic rate of corporate income tax lowered from 33% to 31% (OECD Economic Survey: UK, 1998, p. 61)	**Reform Object:** *UK cut in main rate of corporation tax from 33% to 31%* **Legal Tax Name:** *Corporation Tax* **Policy Object:** *main (full) rate percentage* **Legal Condition:** *applies to companies chargeable to corporation tax at the main rate (i.e., not the small companies' rate or other special/ring-fence rates)* **Numeric Detail:** *cut of 2 percentage points; financial year starting 1 April 1997 main rate 31% (previously 33%)* **Implementation Date:** *1997-04-01* **Affected Group Rule Based:** *owners/shareholders of companies within the charge to UK corporation tax that pay the main rate* **Mechanism:** *reduces the corporation tax main rate applied to taxable company profits* **Evidence:** *HMRC table shows full rate 33% through FY1996 and 31% for FY1997; Hansard confirms cut from 33% to 31% on 1 April 1997* **Sources:** https://www.gov.uk/hmrc-internal-manuals/company-taxation-manual/ctm01750; https://api.parliament.uk/historic-hansard/written_answers/1999/feb/15/corporation-tax

The package Quallmer uses the information package retrieved by Ellmer to code each reform according to a LLM-tailored version of the codebook. The key output variables

are tax type, tax component, and specific affected group - that is, a relatively precise group that can be directly inferred from the reform (e.g., higher-rate income taxpayers, small and medium-sized enterprises, or pensioners).

The validation of the semi-automated coding of the tax components and affected group specific was performed and refined through three rounds of pilot studies using a human-coded "gold standard". In each round, a batch of snippets was independently coded by a human gold standard - a tax lawyer, and the results were compared against the automated output. Disagreements were discussed and used to refine the simplified codebook fed to Quallmer. An out-of-sample validation exercise delivered an F1 of 0.87 for the variable tax type and 0.74 for tax component. When restricting to the cases where Quallmer itself delivered a high confidence in its coding (74% of the cases), the corresponding F1s were 1 and 0.92.

2.2.2.2 Coding Progressivity

We code progressivity as a binary variable (progressive or regressive) for each tax reform snippet. To do so, we use the specific affected group from the previous step; we locate that group in the income distribution and assess whether the reform increases or decreases their relative tax burden. We code a reform as progressive if the change in tax burden falls more heavily on higher-income groups relative to their disposable income, and as regressive if lower-income groups bear a proportionally greater burden (for detailed operationalization, see Appendix 3). In order to perform this step we use both Ellmer's distributional information output as well as the reference classification provided in Appendix 1, which is derived from the literature and lists the most common affected groups and their typical position in the income distribution. We code reforms either as progressive, regressive, neutral, or ambiguous. Neutral and ambiguous reforms are coded as missing, but in robustness checks we coded them as having intermediate progressivity (with the progressivity variable taking values 0 if regressive, 1 if progressive, and 0.5 if neutral or ambiguous).

Among the assumptions we use to code progressivity, two are particularly consequential:

- Where corporate or business entities are the formal incidence of a reform, individual shareholders or owners are assumed to bear the effective burden of that reform.
- Only first-order distributional effects are considered. Behavioral responses, spillovers and general equilibrium effects are not taken into account.

The validation of *progressivity* coding was performed through several trials and an inter-coder reliability test. Three researchers independently coded a sample of 100 items yielding a Krippendorff statistic in pairwise terms of 0.76 on average, higher than the conventionally assumed reliability thresholds (Krippendorff 2019).

2.2.3 Merging the Datasets

In order to deliver a meaningful comparison of the tax reforms implemented and those in the manifesto, we merge the manifesto and OECD datasets by matching pledged measures to implemented policies (see Appendix 2). This allows us to classify each pledge as fulfilled, partially fulfilled, or not fulfilled, and to identify implemented measures that parties did not include in their electoral platform.

The matching proceeds from manifesto to OECD: for each pledge in the manifesto dataset, we check whether a corresponding implemented policy exists in the OECD dataset. The complexity of the matching task depends on the specificity of the pledge. We match specific pledges in a relatively straightforward way, as their reform object and direction are clearly defined. Broad and moderate pledges require more interpretive judgment: we identify plausible corresponding policies by examining tax type, component, base, and affected group jointly.[2] Pilot merging exercises show a relatively high level of agreement between researchers.

Broad (and moderately broad) pledges are not straightforward to match to implemented policies in a substantively relevant way: citizens may legitimately disagree as to whether a given implemented policy actually corresponds to a broad pledge. For instance, suppose that a winning party makes a broad pledge that "we want a tax regime that supports British business" and then implements a large battery of tax cuts and allowances for business. Should all these pro-business tax reforms be considered as fulfilling the pledge? We argue that there are grounds for legitimate disagreement in that respect: some citizens may feel that such a battery of reforms does not correspond to what they expected the party to do based on that broad pledge. For this reason, we conduct two types of merging: a broad merging that considers all pledges, and a specific where only specific pledges are merged, and where implemented reforms that could be theoretically matched to a broad pledge (like the battery of corporate tax reforms in the example above) would be coded as not pledged.

2.3 Descriptive Overview of the Data

Table 3 summarises the tax pledges and the implemented tax policies of the fourteen governments in our sample.

The number of tax pledges varies widely across governments, from 13 for Labour 2005 to 119 for the SPD-Grünen-FDP coalition of 2021. About half of all pledges are specific (52.4%), and this share varies more across individual governments (30.8% to 73.9%) than between the two countries.

Fulfillment differs sharply between the two countries. UK governments fulfill most

[2] A special case involves status quo pledges - commitments not to change a tax (e.g., "we will not raise the basic rate of income tax"). We consider these pledges fulfilled if no corresponding change was implemented during the government term. To verify this, we conduct a simple Google search for each status quo pledge.

Table 3: Tax pledges and implemented tax policies by government, UK 1997-2019 and Germany 1998-2021

Government	N pledges	Specific (%)	Fulfilled (%)	Progressive pledges (%)	N implemented	Progressive implemented (%)	Bias (pp)
SPD-Grünen 1998	59	54.2	54.2	70.8	63	40.7	-30.0
SPD-Grünen 2002	26	30.8	53.8	73.7	30	50.0	-23.7
CDU/CSU-SPD 2005	29	69.0	89.7	46.9	61	51.1	4.2
CDU/CSU-FDP 2009	54	59.3	55.6	34.1	52	48.7	14.6
CDU/CSU-SPD 2013	49	42.9	42.9	64.3	25	47.6	-16.7
CDU/CSU-SPD 2017	42	40.5	71.4	59.5	44	45.5	-14.0
SPD-Grünen-FDP 2021	119	47.9	50.4	66.3	78	58.3	-8.0
Labour 1997	16	37.5	100.0	64.3	62	56.9	-7.4
Labour 2001	19	42.1	89.5	78.6	47	66.7	-11.9
Labour 2005	13	53.8	84.6	57.5	37	55.9	-1.6
Conservative-LibDem 2010	62	69.4	79.0	71.7	67	57.4	-14.3
Conservative 2015	23	73.9	100.0	33.3	27	33.3	0.0
Conservative 2017	17	41.2	64.7	61.5	12	60.0	-1.5
Conservative 2019	24	58.3	100.0	55.0	54	44.2	-10.8
All governments	552	52.4	65.9	60.9	659	51.5	-9.4

of their tax pledges, especially with Labour 1997, the Conservatives 2015 and the Conservatives 2019 all at 100%, and 86.8% of UK pledges are fulfilled overall. German governments fulfill far fewer, 56.3% overall and between 42.9% (CDU/CSU-SPD 2013) and 89.7% (CDU/CSU-SPD 2005). This is consistent with the pledge fulfillment literature, which finds that single-party governments in unitary systems deliver more of their pledges than coalitions in federal systems (Naurin and Thomson 2020; Thomson et al. 2017).

The last column of Table 3 reports the *raw* post-electoral bias: the share of progressive reforms among implemented policies minus the share among pledges. It is negative for eleven of the fourteen governments. Pooling all governments, 60.9% of pledges are progressive against 51.5% of implemented policies, a gap of 9.4 percentage points against the interests of less affluent citizens. Averaging the fourteen government-level biases, the gap is larger in Germany (10.5 points) in Germany than in the UK (6.8 points).

The gap is not shaped by partisanship in any obvious way. The two largest gaps are left-led (SPD-Grünen 1998, -30.0, and SPD-Grünen 2002, -23.7), but the sizeable gaps also appear under right-led governments (Conservative-LibDem 2010, -14.3; CDU/CSU-SPD 2017, -14.0; Conservative 2019, -10.8). The smallest gaps likewise come from both sides: Labour 2005 (-1.6) and the Conservatives 2017 (-1.5).

Only two governments show the opposite sign, and neither is a progressive outlier. The CDU/CSU-FDP coalition of 2009 has the largest positive bias (+14.6), but this reflects an unusually unprogressive platform rather than progressive policy: only 34.1% of its pledges were progressive, the lowest value in the sample, while its implemented share (48.7%) still lies below the pooled average of 51.5%. The same logic applies to CDU/CSU-SPD 2005 (+4.2), which pledged 46.9% and implemented 51.1%. A third government, the Conservatives 2015, shows no gap at all (0.0), pledging and implementing the same low share of progressive policies (33.3%).

Finally, the raw gaps in Table 3 are not adjusted for composition. Governments differ

Table 4: Post-electoral bias for all as well as specific-only promises

	(1)	(2)	(3)	(4)
Implemented	−0.065+	−0.100**	−0.055+	−0.098**
	(0.034)	(0.033)	(0.029)	(0.032)
Num.Obs.	1020	804	1178	896
Promises	All	Only Specific	All	Only Specific
Ambiguous progressivity	coded NA	coded NA	coded 0.5	coded 0.5

+ p <0.1, * p <0.05, ** p <0.01, *** p <0.001

both in their overall level of progressivity and in how many policies they implement, so the pooled figure can be influenced by a few large governments. Section 3 therefore re-estimates the gap with government fixed effects.

3 Results

The post-electoral bias is essentially the average progressivity of implemented policies minus the average progressivity of the policies in the manifesto. We estimate it using a regression approach, which also allows us to control for government fixed effects. We use the following procedure. We stack observations of promised policies on top of observations of policies that are implemented (this implies policies that are both promised and implemented are repeated). We create an indicator function for the stacked sample of implemented policies and regress progressivity on this indicator function. The resulting regression coefficient is numerically equivalent to the post-electoral bias. The standard errors are clustered in order to deal with the repetition of observations.[3]

We conduct separate analysis using all policies and using only specific promises. We also check the robustness of our results to coding of ambiguous and unclear progressivity as either missing or with value 0.5. Table 4 shows the results. Note that a negative coefficient indicates bias towards the better off: less progressivity in implemented policies than in the manifesto. Columns 1 and 2 show the benchmark specification, with ambiguous progressivity coded as missing, including as well as excluding broad promises. The post-electoral bias is negative and statistically significant showing that implemented policies tend to be more regressive than those promised in the manifesto. The gap is larger when we consider only specific promises, suggesting that some of the regressive policies implemented are stated in the manifesto, but in rather unspecific terms. Results are very similar when we code ambiguous progressivity as intermediate between regressive and progressive as opposed to missing.

[3]We maintain the clustering at the government level, which nests the policy ids that would usually be used to deal with repeated observations.

4 Conclusion

A semi-automated approach to coding tax progressivity appears as a promising avenue to estimate biases in the tax policy-making process. Tax reforms generate relatively clear specific affected groups. For instance, a tax rate change corresponding to a particular income bracket affects those with incomes within that bracket. With some additional information and some assumptions, it is possible to code where in the income distribution these groups are or, more precisely, where in the distribution are those that are most affected by the reform relative to their income. This allows us to code the progressivity of a reform in a parsimonious way. LLMs are useful in the coding process because they allow us to extract at scale an "information package" on tax reforms that delivers the specific groups that are affected by each reform. Human coding is still necessary, to code where in the distribution these groups are.

We have implemented this procedure to tax reforms in the UK and Germany from the 1990s to the 2020s, extracting the list of tax reforms implemented from OECD reports and the tax reforms pledged from the manifestos of the winning coalition parties. Our analysis shows a significant bias in the post-electoral process: tax reforms proposed in manifestos tend to be more progressive than those actually implemented.

Our approach has several limitations. First, we analyze the number and direction of tax proposals rather than weighting reforms by their substantive fiscal importance. Second, our assessment of progressivity is based on first-order effects and does not incorporate behavioral responses such as tax avoidance. Third, our estimates of progressivity are not full-fledged policy simulations but approximations based on common sense and available secondary evidence. For instance an increase in the top tax rate may in reality be distributionally ambiguous if the very wealthy do not pay income tax. Our common sense interpretation of tax incidence, however, might be well fitted to understand the behavior of politicians, who take the decisions leading to potential biases under informational conditions similar to ours.

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5 Appendix 1 - Affected Group Specific and Broad

5.1 Key Coding Assumptions

1. Tax incidence falls on individuals, not entities. We consider the affected group specific in terms of the individuals who ultimately bear the tax burden -e.g., shareholders, employees, consumers- rather than the legal entities that represent it (e.g., firms).

2. CIT incidence is assigned to shareholders. Following standard public finance theories, we treat corporate income tax as falling primarily on the owners of capital (shareholders). This means CIT reforms are systematically classified as affecting the top of the income distribution. We note, however, that a portion of corporate tax can be passed on to workers through lower wages (Fuest, Peichl & Siegloch, 2018), especially to low-skilled employees - a finding documented specifically for Germany. Coders should be aware of this but should follow the primary assumption for the purpose of this research.

3. Tax deductions vs. tax credits. These instruments differ in their distributional effect. A tax deduction reduces taxable income, so its benefit depends on the marginal rate of the taxpayer: higher-income individuals in higher brackets save more from the same deduction. A tax credit reduces the tax liability directly by a fixed amount, regardless of income bracket, providing the same absolute benefit to all. Means-tested credits (e.g., Working Tax Credit in the UK) are withdrawn as income rises, making them more valuable to lower earners.

4. Employee vs. employer social security contributions (SSC). Employee contributions are deducted directly from the worker's gross salary. Employer contributions are paid by the employer on top of the salary. This research focuses on the first-order statutory incidence: employee SSC directly reduces worker take-home pay; employer SSC is coded as falling on the employer in the first instance. However, if any SSC reform affects both employers and employees at the same time, it is assumed that the primary group affected is the employees. It is because the economic literature suggests that both forms ultimately fall on workers through lower wages (Melguizo & González-Páramo, 2013).

5. First-order effects only. This research captures only the direct, first-order effects of tax reforms on the affected group. Spillover effects, behavioural responses, and general equilibrium effects are not considered. The distributional assessment relies on the formula $\Delta T/Y$ -the change in tax burden relative to income- evaluated at the point of impact.

6. Impact relative to the status quo. The impact of a reform is assessed relative to what would have happened without the reform, not relative to inflation or any other reference points. Therefore, not inflation nor any other reference but only the changes brought about by the tax reform are directly taken into account in establishing the relationship between the affected group specific and broad.

5.2 Tax Reform Target Groups: Position in the Income Distribution

The table below provides stylized facts to guide coders in mapping the *affected group specific* to the *affected group broad*. The classification relies on the formula $\Delta T/Y$ - the change in tax burden relative to income - evaluated at the point of first-order impact. For each group, the table provides the typical position in the income distribution and a brief mechanism-based explanation with inline citations.

Table 5: Tax Reform Target Groups and Position in the Income Distribution

Target Group	Position in Distribution	Explanation
Consumers (VAT / general excise)	Bottom & lower-middle	Lower-income households spend a higher share of their disposable income on consumption goods. When VAT burden is measured relative to current income, it is regressive in all OECD countries (OECD/KIPF, 2014; Thomas, 2020, p. 25). The IFS reports that a uniform VAT imposes losses of around 4.4% of expenditure for the bottom decile versus 2.4% for the top decile (IFS, 2009, p. 204). Note: whether VAT is regressive relative to lifetime income is debated, but when assessed against current income — the most policy-relevant metric for this study — VAT consistently falls more heavily on lower-income households (de la Feria & Swistak, 2024).
Smokers / tobacco consumers	Bottom	Tobacco excise taxes are strongly regressive. Smoking prevalence is significantly higher among lower socioeconomic groups: in England, smoking rates were approximately 26% among routine and manual workers versus 10% among managerial and professional occupations (Beard et al, 2021, p. 108). Lower-income households are more affected by consumption tax on tobacco (OECD/KIPF, 2014, p. 39, 111-116).
Alcohol consumers	Bottom & lower-middle	Alcohol excise is less uniformly regressive than tobacco. Lower-quintile households spend a higher share of income on alcohol, though the gradient is less steep. Lower-income groups bear the largest burden from duty increases (OECD/KIPF, 2014, p. 39).
Motorists / transport fuel consumers	Middle & lower-middle	OECD/KIPF (2024) finds that fuel taxes in general are regressive in terms of expenditure but middle-income groups bear the real burden in terms of income (p. 144). Another study by OECD for 21 countries finds that transport fuel taxes are very slightly regressive, as households in lower expenditure deciles spend a lower share of their total expenditure on transport fuel. The burden tends to peak in the middle deciles (Flues & Thomas, 2015, p. 19). Taxes on heating fuels are slightly regressive, i.e., the percentage of expenditure spent on them decreases with expenditure. Taxes on electricity are more regressive than taxes on heating fuels (Flues & Thomas, 2015, p. 2).
Wage earners (employees)	Bottom & middle	Workers who receive income primarily through employment wages rather than capital income. PIT reforms affecting basic or lower rates, increases to the personal allowance, or changes to low-income tax credits primarily affect this group. UK income distribution data show that the median employed taxpayer earns in the range of £24,000–£28,000 (varying by year), falling in the lower-middle to middle segment of the distribution (HM Revenue & Custom, 2025).

(continued)

Target Group	Position in Distribution	Explanation
Higher-rate / top-rate PIT payers	Top & upper-middle	UK: Taxpayers subject to the 40% higher rate have income above approximately £37,700–£50,270 (varying by year — see PIT threshold table), placing them broadly at the 75th–80th percentile or above. Taxpayers paying the 45% rate are in the top 1–2% (HMRC, 2025; House of Commons Library, 2026). Germany: Taxpayers subject to the 42% top rate have incomes above approximately €62,810 (2025). Those paying the 45% Reichensteuer (above €277,826) are firmly in the top of the distribution (PwC Germany, 2025).
Self-employed workers (non-professional / precariat)	Bottom & lower-middle	This group includes gig workers, freelancers, and non-standard workers who are typically in insecure, low-paid employment. They often lack social insurance coverage and cannot fully access employer benefits. In Germany, self-employed workers generally do not pay mandatory social security contributions, leaving them exposed to income volatility. Reforms to PIT on self-employment income, SSC coverage, or minimum income schemes disproportionately affect this group (OECD, 2018; OECD, 2025).
Self-employed professionals	Middle & top	Doctors, lawyers, consultants, and similar high-income professionals are typically in the top of the income distribution. However, taxi drivers, plumbers and local shop owners sometimes have lower income than regular employees (IFS, 2019, p. 10). Therefore, we assume the bimodal distribution puts the self-employed professionals in middle and top. Personal service providers benefit from the ability to deduct business expenses and may structure income through incorporation to minimise NIC and income tax liability. In the UK, IR35 rules specifically target contractors using personal service companies to access these advantages (Seely, 2019).
Public (state) pensioners	Lower-middle	State pensioners live predominantly on modest fixed incomes. Across OECD countries, around 13% of those aged 65 and over experience poverty (OECD, 2023, p. 6). State pensions replace wages but typically at lower levels than working income. Almost 10 percent of public pensioners in UK face material deprivation (Cribb et al. 2024, p. 16). In both the UK and Germany, reforms to the state pension or to taxes on pension income affect recipients who sit broadly in the lower-middle portion of the income distribution (OECD, 2023; OECD, 2024).
Private pensioners	Middle & upper-middle	Private pension savings are concentrated among middle and higher-income workers who can afford to contribute throughout their careers. Tax reliefs on private pension contributions primarily benefit higher earners at higher marginal rates. In Europe, private pensions are predominantly accessed by those in the middle to upper portions of the income distribution (IFS, 2012, pp. 26-33; OECD, 2024).
Property owners / buyers (residential)	Upper-middle & top	Homeownership is closely correlated with income and wealth. Housing is the main asset of middle-class families but is concentrated among older, higher-income households (OECD, 2022, p. 35, 38). UK council tax caveat: because council tax bands are based on 1991 valuations, the current system is regressive relative to current property values. Households in modest properties in lower-price regions pay a higher share of property value than those in expensive areas, meaning council tax reforms can affect the lower-middle group more than their property wealth would suggest (IPPR, 2025).

(continued)

Target Group	Position in Distribution	Explanation
Employed workers (SSC / National Insurance)	Bottom & middle	SSC (National Insurance in the UK) is levied on earned income — wages and salaries — and does not apply to investment income, capital gains, or dividends, which are more common among higher earners. UK NIC structure: NIC is progressive up to the Upper Earnings Limit (approximately £50,000), above which the rate falls sharply from 12% to 2% (IFS TaxLab, n.d.). This ceiling means high earners pay proportionally less, so NIC primarily falls on the bottom and middle of the wage distribution (IFS TaxLab, n.d., Boden, 2021). Germany: SSC rates are applied up to earnings ceilings (Beitragsbemessungsgrenze), approximately €96,600 for pension and unemployment insurance in 2025. Above these ceilings no further contributions are levied, meaning higher earners pay a falling share of total income in SSC (PwC Germany, 2025). Economic evidence suggests that in the long run workers bear approximately two-thirds of the total SSC burden through lower wages, regardless of whether contributions are formally employee- or employer-paid (Melguizo & González-Páramo, 2013, p. 267).
SME owners / shareholders	Upper-middle & top	Small businesses (under approximately 50 employees, approximately €10m turnover) and medium businesses (under approximately 250 employees, approximately €50m turnover in the EU) are owned by individuals generally in the upper portion of the income distribution. SME owners benefit from lower corporate tax rates, investment allowances, and R&D tax credits. UK evidence shows their owners are concentrated in the upper-middle and top quartiles (Crawford & Freedman, 2010, pp. 1090-1094; IFS, 2019).
Corporate shareholders / investors (capital income)	Top (upper 10% to top 1%)	Investment income — dividends, capital gains, and interest — is overwhelmingly concentrated at the top of the income distribution. The wealthiest 1% own approximately half of all corporate shares; similar concentration is observed across advanced economies including the UK and Germany. In most countries, capital income is taxed at lower effective rates than wage income, further concentrating after-tax returns at the top (Saez & Zucman, 2016, p. 107; Saez & Zucman, 2019). Important qualification on CIT incidence: while the codebook assigns CIT to shareholders, Fuest, Peichl & Siegloch (2018) find that roughly half the corporate tax burden in Germany is passed on to workers through lower wages. Coders should apply the top-group classification for CIT reforms unless a snippet specifically indicates a wage mechanism (Fuest, Peichl & Siegloch, 2018).

Note: These classifications represent first-order, direct distributional effects. Spillover effects, behavioural responses, and general equilibrium effects are not considered. See Key Coding Assumptions above.

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6 Appendix 2 - Guidelines for Extraction, Coding and Merging

6.1 Guideline for Extracting Tax Reform Pledges from Party Manifestos

1. Definition and Operationalization: Tax Reform Pledges

- Tax reform pledges are commitments made in party manifestos to implement specific taxation policies. The manifesto literature defines pledges as "commitments to enact or bring about certain policies or outcomes" and, more importantly, as commitments that "are testable" (Naurin & Thomson 2020, 292). Accordingly, tax reform pledges must be specific and meet testability criteria. A tax reform pledge qualifies as a commitment when it involves prospective, measurable, or estimable changes in taxation whose testability can be assessed through fulfillment or non-fulfillment.

- In simple terms, an election pledge is a promise or commitment to enact policy changes *in the future*. Tax reform pledges specifically refer to proposed legislative changes in taxation that will come into effect in the future; tax reforms that have already been decided or legislated do not qualify as pledges. Pledges typically employ the future tense or prospective language, such as "we promise…," "we commit…," or "we will…."

- Every tax reform is a fiscal reform, but not every fiscal reform is a tax reform (as the fiscal reform domain also includes government/public spending). For example, subsidies (i.e., money transfers provided by the government to individuals, companies, or sectors) constitute fiscal reform but not tax reform. On the other hand, changes to social security contributions, which are paid by both employers and employees, do constitute tax reform. Other tax reforms may occur in the following areas: unemployment insurance, pension contributions, health care contributions, and care insurance.

- In the case of Germany, it is necessary to include tax pledges that alter mandatory social-security contribution rates or ceilings for long-term care (*Pflegeversicherung*), pension (*Rentenversicherung*), health insurance (*Gesetzliche Krankenversicherung*), and unemployment insurance (*Arbeitslosenversicherung*), because these contributions function as compulsory public levies. These contributions are legally classified as insurance contributions within *Sozialversicherung*, but they resemble capped payroll taxes in practice, given their mandatory nature and statutory rates.

- Tax reform pledges occur within the domain of *national legislation*. Some tax reforms proposed by political parties extend beyond national borders. This project focuses exclusively on tax changes that will be implemented at the national level. The benchmark here is whether the proposed reform can be enacted through national legislation, which coders can subsequently verify by consulting OECD reports to determine whether the reform was implemented. For example, the Labour Party's specific commitment in its 1997, 2001, and 2005 manifestos "to use veto power on EU tax harmonization" does not qualify as a tax reform pledge within the scope of this project.

- This guideline outlines the procedure for extracting tax reform pledges from party manifestos in the form of *snippets*. Snippets may vary in length - sometimes short, sometimes long; sometimes a single sentence, sometimes three or four sentences - depending on what is needed to clarify the tax reform pledge in question. During the extraction process, the key objective is to present the background, context, and details of the proposed tax change in a manner that is both clear and as comprehensive as possible. The cleaning of the extracted original snippet will be conducted at a subsequent stage (prior to coding). It is sufficient for the extraction researcher to record the manifesto, the page number, and the broadness status - the details of this procedure are provided below.
- All snippets extracted from party manifestos (in the extraction phase) must be cleaned. Original snippets may contain multiple tax changes in a complex way, as these entries also provide background and contextual information. The extractor is responsible for cleaning original snippets in an understandable way.
- The extractor is responsible for disaggregating complex snippets containing several tax reforms to ensure that each cleaned snippet (*manifesto_snippet_clean*) contains only one tax reform. The procedure is explained in detail in the codebook.

2. Practical Tips for Extracting Tax Reform Pledge Snippets

Party manifestos are often not systematically organized; therefore, the snippet extraction procedure involves some complexity. The following criteria should guide the extraction process:

- Pledges imply commitments for the future - only reforms that will come into effect during the party's next term in power should be extracted.
- Past changes in taxation are not pledges - reforms that have already been decided and/or legislated should not be extracted.
- Accordingly, avoid extracting snippets that use retrospective language and/or refer to the past tense.
- Pledges may appear anywhere in the manifesto document; pledges may be repeated several times throughout the document.
- Pledges often appear in sections concerning Economy, Welfare, Prosperity, or under headings related to fiscal policies.

Solid strategies for extraction:

- Skim the entire manifesto document, paying closer attention wherever numerical values appear. (For an effective skimming strategy, see: https://learningcenter.unc.edu/tips-and-tools/skimming/)
- Extract the relevant sentences that provide context for the proposed tax reform. Try to extract the shortest passage that clearly identifies the tax reform. Preferably the

extracted snippet should be one sentence, but if contextual information is necessary, two or three sentences can also be extracted.

- The same commitment may appear multiple times in a manifesto - select the instance that contains the most detailed information.
- Transfer the extracted snippet to the Excel template.
- To ensure no tax reform pledge is missed, conduct a keyword search (CTRL+F) of the entire document at the end. Keywords to search: tax, taxation, tax reform, rate, allowance, relief, threshold, (excise) duty, income tax, tax credit, contribution, *Beiträge* [DE], *Freibetrag* [DE].
- The researcher conducting the extraction is only required to record the manifesto source, page number, and broadness-specificness classification in the Excel template.
- The template includes a "Comments" column. When necessary, the extraction researcher should note any observations regarding the tax reform in this column. Example comments include: "probably not about taxation"; "unclear if this is past or a pledge"; "unclear if this is about taxes"; "unclear if this is tax or spending"; "maybe repeated."
- After collecting all the snippets, check for any duplicate statements. If any duplicates are found, delete the one that contains less information.

3. Strategy for Coding Broadness-Specificness

Immediately after the extraction phase, researchers are expected to classify each snippet according to broadness-specificness. This classification comprises three categories, detailed below.

- *Specific*: Specific pledges leave no room for ambiguity. They clearly identify the tax type, base, component, and affected groups, and are narrow enough that they can only be fulfilled in one way. A specific pledge is definitively a promise of tax reform, and what it entails and how it will be implemented are clearly indicated. Example: "We will now not raise the basic or top rate of income tax and extend the 10p band" (Labour Party Manifesto 2001, p. 6).
- *Moderate (Moderately Broad)*: The proposed action is explicitly stated or strongly implied to occur through taxation or tax reform; however, what the reform entails and how it will be implemented remain unclear. Moderate pledges are vague in that they often do not specify beneficiaries, do not provide details, and may be fulfilled in more than one way. Interpreting these broader tax reforms requires individual judgment. Examples: "We will not abolish joint taxation for married couples, but we will reform it in order to promote child-rearing" (SPD Manifesto 2002, p. 47). "We want a tax regime that supports British business" (Labour Party Manifesto 2005, p. 17).
- *Broad*: It is unclear whether the statement constitutes a promise of tax reform, though implementation through taxation is probable. There is a high probability that the statement concerns tax reform. For broad pledges, the researcher should have a rough idea or estimate of who will be affected and how the reform might operate; otherwise,

the snippet should not be extracted. Examples: "We will create an investment-friendly environment" (Labour Party Manifesto 1997); "We will support hybrid and fuel cell vehicles, which already offer a halving of fuel consumption and CO2 emissions, with cheaper motoring to match - and for cleaner fuels and biofuels" (Labour Party Manifesto 2001, p. 41).

- *Do Not Extract*: General goals without explicit or implied tax mechanisms, or goals achievable through spending or regulation alone, should not be extracted. If the policy objective can be achieved through non-tax instruments - government expenditure, social spending, or welfare measures - do not extract it as a tax reform pledge. If the goal is general (e.g., "reduce poverty," "increase growth"), do not extract. If there is a significant likelihood that the proposed policy could be implemented through other macroeconomic tools (e.g., regulation, deregulation), do not extract.

6.2 Guidelines for Extraction of Tax Policies in OECD Reports

1. Definition of Tax Policies

Tax policies refer to government actions that change the structure or administration of taxation. These include reforms affecting tax types (e.g., personal income tax, corporate income tax, VAT, property tax, environmental taxes), tax rates, tax bases, tax thresholds, exemptions, deductions, allowances, tax credits, payroll taxes and social security contributions, and excise taxes or duties. A tax policy reform may involve introducing, increasing, decreasing, abolishing, extending, or modifying any of these components.

2. Temporal Scope of Extraction

The objective is to identify actual tax policy actions rather than speculations or recommendations. We only include:

- Tax reforms already implemented.
- Tax reforms legislated or passed into law.
- Tax reforms announced in official government budgets.
- Tax changes with a clearly specified implementation timeline.
- Temporary tax measures if officially implemented.
- Reforms mentioned retrospectively (e.g., reforms implemented in earlier years but described in the report).

We exclude:

- OECD policy recommendations.
- Possible or hypothetical reforms.

- Political debates or proposals without official adoption.
- General evaluations of tax policy that do not describe a concrete reform.

3. Scope of Government Level

Focus primarily on tax reforms at the national government level. EU-related or intergovernmental legislation is excluded. If OECD reports explicitly discuss subnational tax reforms (e.g., municipal or regional tax changes) that significantly affect taxation policy, these may also be extracted.

4. Where to Search in OECD Reports

Priority sections include:

1. Fiscal Policy section - usually contains most taxation information.
2. Assessment and Recommendations - often summarizes the effects of recent reforms.
3. Tables within Fiscal Policy sections - may summarize budget policy changes.
4. Calendars of Economic Events or Key Economic Developments - often contain concise reform descriptions.
5. Full-text keyword search.

After reviewing the sections above, perform a full-text search to ensure no reforms are missed. Suggested keywords: tax, taxation, tax reform, fiscal, VAT, corporate tax, income tax, payroll tax, social contributions, rate, threshold, credit, allowance, relief, excise, duty, levy, *Beiträge* [DE], *Freibetrag* [DE].

6. Identifying a Tax Reform

Tax reforms are often indicated by policy action verbs such as: introduced, increased, reduced, abolished, extended, expanded, tightened, phased out, broadened the tax base, raised thresholds, lowered thresholds, or implemented.

7. Further Extraction Rules

- Extract the shortest passage that clearly identifies the tax reform.
- Preferred: one sentence.
- Acceptable: two or three sentences if context is necessary.
- Include context when needed to clarify the type of tax, policy change, implementation timing, or scope of the reform.

8. Multi-Year or Phased Reforms

If a reform is implemented gradually across several years, extract the full snippet describing the reform and its timeline.

9. Temporary Tax Measures

Temporary tax changes should be extracted if they were officially implemented or legislated.

10. Solid Strategies for Extraction

Follow this sequence:

1. Read the Fiscal Policy section carefully.
2. Review the Assessment and Recommendations section.
3. Examine tables summarizing fiscal measures.
4. Check economic policy calendars.
5. Conduct full-text keyword searches.

The objective is to ensure no tax reforms are missed.

11. Data Collection

Collect all identified tax reform snippets in Excel. At the extraction stage, do not remove duplicates and do not interpret or code reforms. The focus is on complete data collection.

12. Final Check

Before completing extraction, quickly review the Fiscal Policy section again to ensure no tax reforms were overlooked. The extraction process prioritizes completeness over precision.

6.3 Guideline for Coding Manifesto Snippets

- For each cleaned snippet, the following information must be recorded by the researcher: source (political party manifesto), year (election year to which the manifesto pertains), and page number (from which the snippet was extracted).
- An identification label (*id_label*) should be constructed for each coded snippet. The *id_label* is formed by combining the tax type and the tax component, and helps to keep track of similar reforms and to merge the datasets. For details of the *id_label* procedure, see the Codebook.
- For the manifesto snippets, tax components, affected group and progressivity are coded manually by researchers.
- The coding procedures are conducted in accordance with the detailed instructions, definitions, rules, and examples provided in the codebook.

6.4 Guideline for Coding OECD Snippets

- Prior to coding, ensure that all snippets extracted from OECD survey documents (in the extraction phase) are in clean format. Original snippets may contain multiple tax changes in a single entry. The coder is responsible for disaggregating entries to ensure that each clean snippet (*oecd_snippet_clean*) contains only one tax change. The procedure is explained in detail in the codebook.
- For each clean snippet, the following information must be recorded: source (OECD report), year (publication date), and page number (from which the snippet was extracted).
- An identification label (*id_label*) is constructed for each coded snippet. The *id_label* is formed by combining the tax type and the tax component, and helps to keep track of similar reforms and to merge the datasets. For details of the *id_label* procedure, see the Codebook.
- For all parameters, categories and explanations are provided in the codebook.
- Tax components are coded in a semi-automated way. For coding tax type, base, component, component detail, specific change, direction, affected group specific, affected group broad, and how affected parameters, the Ellmer and Quallmer packages are used in R.
- The progressivity parameter should be coded by researchers manually in consultation with the codebook and the Appendix (relating affected group specific to broad).
- The coding procedures are conducted in accordance with the detailed instructions, definitions, rules, and examples provided in the codebook.

6.5 Guideline for Merging the Manifesto (Tax Pledges) and OECD (Tax Policies) Datasets

The manifesto dataset and OECD dataset are merged manually by the researchers, which requires careful attention to detail.

- The recommended merging technique is to start from the direction of the manifesto data toward the OECD data. This means checking whether each pledge in the manifesto has been fulfilled via the OECD, and matching the pledges and policies that are considered to constitute a fulfilled pledge. The reverse direction - moving from the OECD data to the manifesto data - would be much more time-consuming.
- Start by copying the IDs and the snippets from the manifesto files.
- The primary merging method is to use *id_labels*. The most straightforward way to merge the manifesto dataset with the OECD dataset is to match entries using the *id_labels* contained in both datasets. As explained in the codebook, *id_labels* are constructed by combining the tax type and component.

- An alternative merging method is to use the *tax_type* variable in both datasets. Matching and merging can also be performed by examining the *tax_type* variable, which is present in both the manifesto and OECD datasets.
- The broad-specific variable from the manifesto dataset should be transferred to the merging master key document.
- *Specific and moderate pledges*: Merging specific and moderate pledges from the manifesto dataset with tax policies in the OECD dataset is relatively straightforward.
- *Broad pledges*: Merging broad pledges from the manifesto dataset with tax policies in the OECD dataset is a challenging process. To accomplish this, the researcher must understand the nature of the pledge and carefully match it with corresponding tax policies by considering the tax type, component, base, and affected group.
- *Addressing status quo pledges*: Some pledges in the manifesto dataset *promise* to maintain the status quo; these are pledges that are fulfilled without requiring any action (e.g., "we will not…"). It is not possible to find records of these types of commitments in OECD reports. Therefore, whether status quo pledges have been fulfilled is assessed through Google searches and AI assistance. If the status quo has been maintained, it is marked as "fulfilled" in the master key.
- Some pledges are not fully fulfilled. For example, a pledge to increase the PIT top rate by 10% may have been made, but in reality it may have only been increased by 5%. In such cases, these pledges are recorded as "partially fulfilled" in the master key.

7 Appendix 3 - Codebook

Table 6: Codebook variable definitions

Variable name	Definition and Categories
OECD_report	Records the exact OECD publication (title and year) from which the snippet was extracted. Use the report's official name as shown on the cover or in the bibliographic header (e.g., "OECD Economic Survey: United Kingdom 2010"). This field is used for traceability and replication.
snippet_original	Extracts statements describing tax policy changes exactly as they appear in the OECD report. The snippet serves as the primary unit of analysis, derived solely from the source document. Each snippet should capture two key elements: the object of reform (typically a specific tax component) and the nature of the change (typically an increase or decrease). Note that original snippets may refer to multiple interrelated reforms – e.g., adjustments to several components or rates within a single policy reform.
snippet_clean	Isolates a single reform element from `snippet_original`. The goal is **one row per discrete policy change** affecting one tax type and one component-object. If the original snippet mentions multiple tax types or multiple component objects, split into separate clean snippets in separate rows. In rare cases, background research may reveal that a "single" clean snippet corresponds to multiple distinct legislative sub-rules; in such cases, further split the reform into multiple rows and record each sub-rule separately, noting the split in comments.
page	Pages where the snippet appears in the OECD report.
tax_type	Classifies the broad tax instrument affected by the reform. Choose the category that best reflects the **legal tax instrument being reformed**. The categories are: 1. *PIT – Personal Income Tax*: Tax levied on individual earnings, including wages, self-employment income, and capital income. 2. *CIT – Corporate Income Tax*: Tax imposed on company income, typically levied on net profits. 3. *Withholding income tax*: Income tax deducted at source by the payor from payments made to employees, contractors, investors, or foreign recipients. 4. *Social Security Contributions [Payroll Tax]*: Compulsory payments by employers and/or employees, typically calculated as a percentage of wages. 5. *Property tax*: Taxes on wealth and property. 6. *Sectoral levy [Windfall tax and transaction tax]*: Special or one-off taxes, often targeting temporary excess profits and/or specific industries. 7. *Consumption tax [VAT and excise duties]*: Taxes on purchases of goods and services. 8. *Trade tax*: Taxes imposed on imports, exports, such as tariffs, duties, etc. 9. *Other*. **LLM instruction**: Code the **legal tax instrument** being reformed. Do not infer tax_type from the affected group.
tax_base	Records **what is taxed** (the economic category the tax is levied on), independent of tax_type. The categories are: 1. *Wages [salaries, and compensation for employed work].* 2. *Self-employment income.* 3. *Capital income [interest and dividends].* 4. *Capital gains.* 5. *Corporate or business profits.* 6. *Total revenue or sales.* 7. *Total savings or savings transfers.* 8. *Consumption/spending.* 9. *Real property value.* 10. *Wealth/inheritance/gift value.* 11. *Transaction value.* 12. *Various*: Applies when the reform affects multiple income sources. 13. *Other*. **LLM instruction**: Code **what is taxed** (the economic base), not the tax instrument. If multiple bases are changed and can be separated, split into multiple rows.

Variable name	Definition and Categories
tax_component	Identifies which element of the tax is changed. Code the component that best captures the **policy lever being modified**. The categories are: 1. *Rate* (e.g., the top personal income tax rate increased from 40% to 42%). 2. *Thresholds/brackets* (e.g., higher rate threshold raised from £50,000 to £55,000). 3. *Base (inclusions/exclusions)*: Modifications to what is considered taxable. 4. *Deductions*: Adjustments to what can be subtracted from gross income. 5. *Tax credit*: Changes to direct reductions in tax liability. 6. *Exemptions (zero or low tax rate)*: Policies that exclude certain amounts or types of income from taxation. 7. *Rebates/refunds*: Measures that return money to taxpayers after collection. 8. *Deferral/timing*: Reforms that affect when tax is owed or paid. 9. *Withholding/payment mechanism*: Changes to how taxes are collected. 10. *Administrative rules*: Changes related to enforcement, compliance, and procedures. 11. *Scope/jurisdiction*: Reforms that redefine who is subject to a tax. 12. *Whole tax*: The introduction or abolition of an entire tax. 13. *Others*. **LLM instruction**: Code the **policy lever** that changes. If multiple components change, split into multiple rows.
component_detail	Makes the reform component clearer by identifying the exact policy object that changed within the already-coded tax_component. It should answer: **what exactly has changed?** Write as a short noun phrase (e.g., top PIT rate, higher-rate PIT threshold, child tax credit). Numerical values or further clarifications should go in component_detail_note. **LLM instruction**: Record the exact **policy object** that changes within tax_component.
component_detail_note	Provides additional specificity required to understand the component change, especially where distributional coding requires precise thresholds, bracket ranges, rates, eligibility rules, or other numerical/legal detail. Leave blank when tax_component and component_detail are sufficient. **LLM instruction**: Add only the **extra detail needed to interpret the object**. Leave blank if unnecessary.
component_detail_link	Records a source link used to determine or verify component_detail and/or component_detail_note, ideally from legislation, budget documents, OECD, HMRC/HMT, Bundesfinanzministerium, IFS, IMF, or similarly authoritative sources. **LLM instruction**: Provide the **most authoritative source link** used to verify component_detail or component_detail_note.
direction	Records the direction of change in the specific policy object identified in component_detail, relative to the status quo of no reform. Note that direction is specified **compared to the status quo of no change**. The categories are: *increase*, *decrease*, *no change*, *new/introduced*, *abolished*. **LLM instruction**: Code the direction of change in the **policy object itself**, not the burden effect on taxpayers.
ID_labels	Assigned after coding tax type and tax component. Each ID serves two functions: (1) tracking the continuity of a specific tax reform across stages, and (2) facilitating the merge between Manifesto and OECD data. Each label should capture the most distinctive characteristics of the reform. *Examples*: personal_income_rate (PIT_rate), corporate_income_threshold (CIT_threshold). **LLM instruction**: Assign a short **stable identifier** for the reform element. Reuse the same label when the same reform appears in multiple snippets.
specific_change	Records the magnitude and direction of the change, ideally using a transparent before → after format (e.g., "reduced from 33% to 31%"). If the source provides only a qualitative statement, leave blank. **LLM instruction**: Describe the change in a **before → after** format whenever possible.
target_sector	Specifies the main sector affected by the specific change. The categories are: *Agriculture*, *Extractive industries*, *Manufacturing*, *Services*, *Finance/banking/insurance*, *Real estate*, *Education*, *Knowledge-based activities*, *Non-profit services*, *Public sector*, *NA* (non-applicable). **LLM instruction**: Code the sector only if the reform is **explicitly sector-specific**. Otherwise code NA.
affected_group_specific	Identifies the group of **individuals directly and first-order affected** by the reform. Write as a short noun phrase in the form **[people] + [precise defining condition]** whenever possible. Examples: taxpayers with taxable income above £43,000; consumers of tobacco products. **LLM instruction**: Record the **individuals directly and first-order affected**. Name people, not firms or sectors.
affected_group_broad	Captures **where in the income distribution** the affected group is located, i.e. the group whose tax payments change the most **relative to their income**. The categories are: *bottom*, *middle*, *top*. If more than one group is affected, list the most affected group first, separated by an underscore (e.g. *top_middle* when the reform directly affects the upper class and, to some extent, the middle class). **LLM instruction**: Code the position of the affected group in the **income distribution** as **bottom**, **middle** or **top**. If several groups are affected, list the most affected one first.

Variable name	Definition and Categories
how_affected	Records whether the directly affected group becomes **better-off or worse-off** due to the reform, relative to the status quo of no reform. Only first-order impacts are considered. The categories are: *better-off*, *worse-off*, *ambiguous*. **LLM instruction**: Code whether the directly affected group is **better-off** or **worse-off** in terms of first-order tax burden.
progressivity	Records the **distributive direction** of the tax change. The categories are: *progressive*, *regressive*, *neutral*, *ambiguous*. Progressivity is determined by the combination of `affected_group_broad` and `how_affected`. A reform is coded as **progressive** if: *top* → *worse-off*; *bottom* → *better-off*; *top_middle* → *worse-off*; *bottom_middle* → *better-off*. It is coded as **regressive** if: *top* → *better-off*; *bottom* → *worse-off*; *top_middle* → *better-off*; *bottom_middle* → *worse-off*.
how_sure	A confidence scale indicating how certain the coders are about their coding for all variables. The categories are: *high*, *moderate*, *low*.
comments	Coders may write down the complications they encounter during the coding process. It does not have a specific format; coders may express why they are unsure or which variable/category they find problematic.