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Deficits, Discipline, and Debt Debates.
**A Computational Social Science Approach to comprehend
political perspectives on fiscal Policy in Germany and Austria.**

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Abbreviations

API	Application Programming Interface
CMP	Comparative Manifesto Project
EU	European Union
SGP	Stability and Growth Pact

1 Introduction

“The immediate formative influence of the fiscal needs and policy of the state on the development of the economy and with it on all forms of life and all aspects of culture explains practically all the major features of events” (Schumpeter 1991, p.101)

The European fiscal crisis of 2011–2012 was a meaningful moment for economic policymaking in Germany and Austria. Both countries were less directly affected than their Southern European counterparts, yet they adopted stringent fiscal policies to reinforce their commitment to stability. The German ‘Schuldenbremse’ (*debt brake*), amended in the constitution in 2009 and fully enacted in 2011, became a cornerstone of fiscal discipline. It limited structural deficits and solidified Germany’s justification for austerity policies. Austria, while not implementing an equivalent constitutional mechanism, maintained strict budgetary control in line with European Stability and Growth Pact (SGP) requirements.

Yet, over the past decade, both Germany and Austria have seen moments of significant fiscal divergence from these austerity-driven principles. The COVID-19 pandemic in 2020 triggered an unanticipated economic shock, prompting Germany to establish an off-budget emergency fund in 2021 that allowed extensive deficit spending beyond the constraints of the debt brake. This fiscal flexibility continued in 2022 with the creation of the €100 billion “Sondervermögen” (off-budget fund) to boost military expenditures in response to Russia’s invasion of Ukraine. These events, but also the economic recession and the deteriorating condition of infrastructure, had critics of the debt brake asking for profound shifts in Germany’s budgetary priorities.

This analysis examines manifestos by political parties from Germany and Austria on their position towards fiscal policy. Germany has long been characterized by a cautious approach to public debt and inflation, deeply embedded in what scholars have termed its “stability culture” (Schmidt 1989). This economic perception prioritizes balanced budgets and price stability. The European fiscal crisis of the early 2010s reinforced this approach, with German policymakers advocating for strict austerity measures, both domestically, and across the

Eurozone. By tracing shifts in political discourse, this study offers a comparative perspective on fiscal policy positions.

The research uses a computational social science approach to explore political perspectives on fiscal policy in Germany and Austria. Conceptionally, it is grounded in understanding fiscal policies, public debt, and their socio-political implications, drawing on prior works like Streeck’s analysis of the evolution of fiscal states and Martin’s perspectives on partisan cleavages in fiscal policy. Additionally, this research examines previous research on budget policy in party programs.

Methodologically, the research integrates quantitative text analysis. The core dataset of this research consists of digitized and annotated party manifestos from the Comparative Manifesto Project (Lehmann et al. 2024). Advanced text analysis techniques, including BERTopic modeling (Grootendorst 2022), are applied to classify topics and identify latent patterns in discourses about fiscal policy. These topics are then aligned with CMP-coded statements to evaluate partisan positions on austerity versus public spending. Additionally, a machine learning model, trained using neural networks and sentence embeddings, classifies fiscal policy statements. This combination of quantitative methods allows predictions about party stances over time.

2 Theoretical Background

Doing research on household policy in the social sciences opens insightful perspectives on the economic constitution of a society. As I. W. Martin puts it, 'public finances are central to any project of preserving or changing the social order' (2020, p.488). Taxes, public debt and government spending are not neutral, but express political power and legitimation. Fiscal policies may be used for redistribution purposes, while tax evasion and deregulation may reinforce social tensions. Martin is especially concerned with partisan cleavages around fiscal policy. While early theories assumed a distinct left-right divide between austerity and expenditure policies, recent literature and empirical research could show that this distinction does not hold in many cases (Garritzmann and Seng 2020; McManus 2019).

2.1 Public Debt

This research is dedicated to map the polarization of German and Austrian parties on their positions in the context of fiscal policies. The focus will be directed towards debt and public investment, rather than taxes. The reason for this is the ambiguity with which parties explain their taxation program. To label a statement on taxation pro- or contra-austerity is challenging, because the diverse quantitative and qualitative aspects of taxes can have different implication on state budgets. Taxes might be levied on tangible things, their market value or on transactions (Martin 2020, p.490). Along increasing the public budget, taxes can also have a social control function by reducing incentives of unwanted actions, e.g. emitting fossil fuels or alcohol consumption (ibid., p.503). This challenges a distinct classification of pro- or anti-austerity statements.

Raising taxes, however, is a fairly unpopular measure, which is why only few parties will include this ambition explicitly in their party program. Lowering taxation, does, if implemented, require either a cut in public spending or the extension of government deficits. Various economic-institutionalist approaches on household policy claim that political democracies generally tend to overspend, as debt accumulation results from electoral pressures. In *The Politics of Public Debt: Neoliberalism, Capitalist Development and the Restructuring of*

the State Sociologist Wolfgang Streeck rejects this hypothesis (2014). He observes a rise in debt of OECD countries since the 1970s, but links it to a decrease in democratic mobilization, manifested by neoliberal reforms (Streeck 2014, pp.145-146).

Streeck examines a transformation process among Western Capitalist economies from the post-war era until today. The three stages of this development are described as the tax state, the debt state and, ultimately, to the consolidation state. The starting point is the crisis of the Keynesian paradigm, driven by declining economic growth in OECD countries, oil price crises, and inflation. Neoliberal economic policies were implemented as a reaction to these challenges. These shifts in policy led to tax cuts for high-income groups and corporations, welfare reforms, and increased military spending. These factors challenged public administration since the 1980s by burdening public budgets (ibid., pp.149-150). The shift from the tax state to the debt state is marked by a conflict between citizens' political and social rights and creditors' commercial rights. This transformation culminated in the financial crisis of 2007/2008 and the following European debt crisis. The austerity policies of recent decades reflect the emergence of the consolidation state, characterized by public administration aiming to reducing their household deficits (2014, p.157).

In '*A General Theory of Austerity*', Simon Wren-Lewis pursues a critical approach to explain the increasing implementation of austerity policies (Wren-Lewis). He suggests that austerity was not just an economic mistake but also a result of political opportunism, particularly by right-wing policymakers. Concerns over rising government debt were used as a pretext to reduce the size of the state and to impose neoliberal reforms.

These developments characterize precisely the development of German household policy and the debates resulting from it. In '*The Crisis and Germany: The Trading State Unleashed*', Armingeon and Baccaro describe a well-established welfare state in the post-war era in which the Grand Coalition from 1966 implemented Keynesian policies by increasing state interventions into the economy. This paradigm began to shiver in the 1970s when recessions and inflation challenged public budgets (Armingeon and Baccaro 2015, p.5). In the 21st century, Germany aimed for budget consolidation through labor market policies (*Agenda 2010*) and austerity rules manifested in the constitution (*debt brake*)(2015).

During the European fiscal crisis, Germany's austerity measures could foster the nation's export-led growth. The authors argue, that this lead to economic growth and stability on the

short run, yet it may lead to long-term structural economic problems. They specifically criticize the framing of Germany’s austerity plan as ‘*doing their homework*’. This narrative was used in German debates on fiscal policy to declare southern European countries’ profligacy as the cause of the fiscal crisis. By calling on these countries to ‘do their homework’, German politicians expected the implementation of austerity measures in the respective countries (Armingeon and Baccaro 2015, pp.3-4). Kurt Hübner analyzed debates in German newspaper articles on fiscal policy. He could show that the CDU and FDP generally held a pro-austerity position. The debt brake, however, was supported by all major political parties, except The Left.

Similarly, Austria has implemented various fiscal consolidation strategies to comply with EU budgetary rules, particularly those under the Maastricht Criteria and Stability and Growth Pact (SGP) (Bröthaler and Getzner 2015). These criteria had been in effect since the Treaty of Maastricht in 1992 and set the economic conditions for joining the Eurozone. The criteria serve as guidelines for fiscal discipline within the EU and include sustainable public finances such as government debt below 60% of GDP (McManus 2019). The governments, composed of all major political parties, have focused on reducing deficits while maintaining key public services while trying to hold the balance between spending cuts and revenue-increasing measures like taxation.

2.2 Analysis of Party Manifestos

In this context, previous research has observed the dynamics of party positions on fiscal policies by analyzing the CMP dataset. Ian McManus uses the CMP data to analyze left-right divisions in the issue of welfare spending. The author highlights how the financial crisis shaped European debates about austerity with a polarizing effect along the political spectrum. The results show that before the financial crisis, the partisan differences were lower than afterwards. The distinction is less clear before the crisis, because left-leaning parties adopted neoliberal reforms in the early 2000s.

Similarly, Lasse Aaskoven analyzes the effect of fiscal rules on polarization in political landscapes by examining CMP party programs (2020). In theory, fiscal rules work as constraints and debates shift on other issues. Through fiscal constraints, parties are forced to

accept trade offs within budget allocation. An example would be the '*guns and butter*' debate, where the scarcity of public budgets challenges governing parties with the decision between military and welfare spending (Mintz 1989). Critics view obligations of debt regulations as a depoliticization of fiscal policy, because fiscal rules themselves become point of political contest. This issue was investigated by Karremans and Kaltenleithner in the case of Austrian budget politics. Their findings suggest that governments maintain considerable autonomy in budgetary decision-making. While fiscal rules might create constraints, the findings indicate that governments do not simply comply passively (Karremans and Kaltenleithner 2021).

In '*Party effects on total and disaggregated welfare spending*', Garritzmann and Seng compare measures of party preferences regarding welfare spending based on the CMP annotations (2020). The paper highlights how differences in welfare spending are attached to a political party's profile only in theory. Promises of welfare expansion in the party program do not necessarily translate into an increase in welfare spending, if the party is elected (2020, p.636). This effect depends on the political profile of governing parties. Welfare plans in party manifestos, the author shows, have a higher chance to be implemented with conservative parties in office.

Maïke Rump analyzed party manifestos to show how the austerity measures imposed in EU countries during the aftermath of the financial crisis eventually led to parties increasingly upholding Eurosceptic positions in their programs (2022). Her research tests, if high austerity measures showed high level of euroscepticism because populations lost faith in European institutions, mainly the ECB.

3 Methodology

The methodology of this research utilizes tools and concepts central to computational social science. The Comparative Manifesto Project (CMP) plays an essential role in this research by providing a rich dataset of annotated party manifestos spanning decades. The CMP enables systematic analysis of political positions through coded statements, offering insights into shifts in party ideologies and policy priorities.

Topic modeling techniques, including BERTopic, enhance this analysis by identifying recurring themes and clustering related statements across diverse documents. Machine learning algorithms further refine this approach, enabling classification of political stances with improved precision and scalability. Together, these methods demonstrate the transformative potential of computational social science in unraveling complex political and economic patterns.

3.1 Data Access and Preparation

The Comparative Manifesto Project (CMP) provides a comprehensive collection of election programs from over 1,000 political parties in more than 50 countries, dating back to 1945. These manifestos serve as a rich dataset for examining political discourse over time. The research group dedicated to this project formed first in 1979, and ever since, its work provides a digital, open-access, multilingual, annotated corpus of electoral programs (Lehmann et al. 2024). Along with the original text, annotations and translations, the corpus provides metadata such as party name, party family, or percentage of votes gained (Volkens et al. 2020).

Since 1998, the German and Austrian files of party programs on the CMP website are annotated. Each sentence within a manifesto is assigned with a code that categorizes its content through interpretations of political statements. Within the CMP, the statements have been manually coded by the participating researchers. This annotation structure enables the quantification of qualitative data and allows for systematic comparisons of party positions (ibid.).

The CMP provides an API for *R* to easily access the election programs and its metadata (Lewandowski 2016). For this research, all German and Austrian party programs available in the database were retrieved. Austria and Germany do not only share linguistic commonalities, their political system is also relatively similar. Both are federal systems with a chancellor at the head of government. Most parties have something like a political counterpart with a resembling political profile, like the CDU and ÖVP, SPD and SPÖ and a Green party in both countries. The Afd and FPÖ are right-wing populist parties in the present era, even though their history is completely different. The same can be said about FDP and NEOS. Only The Left party of Germany does not have an equivalent in this research, because Austria’s communist party, that can be compared to ideologically, gained too little votes in the past.

In *R*, The documents were merged to form one single dataset to cover the major German parties: *CDU*, *SPD*, *FDP*, *The Greens* (DE), *The Left*, and *AfD*, as well as Austrian parties such as *ÖVP*, *SPÖ*, *FPÖ*, *The Greens* (AU), and *NEOS*. Some parties were merged for consistency, for instance, *Bündnis 90* and *The Greens* as well as *PDS* and *The Left*. Other parties were disregarded, because they either gained too little votes (e.g. *Communist Party of Austria*) or didn’t participate in more than two elections. Even though the *Alliance for the Future of Austria* (*BZÖ*), popularized by its founder Jörg Haider, could achieve more than 10% in 2008, it is not regarded in this analysis due to its short-lived political prominence.

After downloading and preparing the data in *R*, the dataset was stored locally in a *.csv* file. Before performing the quantitative analysis, the dataset requires to be cleaned and prepared for further analysis. Manifestos older than 1998 are unannotated. This is not only a challenge for the contextual interpretation. When downloading older party program, the entire text is retrieved and stored within one single entry in the file. For this reason, every document that predates 1998 needs to be tokenized into single sentences and rows. This is essential for conducting the topic model to filter relevant statements. The Python function `split_text_by_date` splits documents older than 1998 into sentences by using NLTK’s *tokenize* function (Bird 2009). It also uses regular expressions to drop symbols or rows identified as noise, such as headlines from the table of contents.

The training data in this model are statements from the dataset that are related to austerity, taxes and public expenditure. To filter these sentences, the coding scheme from the CMP annotations is used. There are two CMP categories that can explicitly be associated

Party	Year	CMP code	Statement
FDP	2017	414: Economic Orthodoxy	<i>Schließlich waren es vor allem die niedrigen Zinsen und Rekordsteuereinnahmen die in den letzten Jahren einen ausgeglichenen Haushalt ermöglicht haben.</i>
Greens DE	2009	414: Economic Orthodoxy	<i>Sie zerstört die finanziellen Handlungsspielräume der öffentlichen Hand und führt uns immer tiefer in die Schuldenspirale.</i>
SPD	2013	409: Keynesian Demand Management	<i>Die öffentlichen Investitionen decken im Durchschnitt der letzten Jahre nicht einmal den Ersatzbedarf.</i>
Greens AU	2013	409: Keynesian Demand Management	<i>Die Austeritätspolitik bringt Europa an den Rand des Ruins. Rekordarbeitslosigkeit und rasant steigende Armut sind die Folge von Lohnkürzungen, Sozialabbau und Steuererhöhungen.</i>

Table 3.1: Sample statements from CMP code 409 and 414

with fiscal policies, which are *409 Keynesian Demand Management* and *414 Economic Orthodoxy*. However, relatively few statements were classified as such. Many party positions that promote increased public spending are coded with different schemes that rather apply to the structural aspects of investments, for example environment (501) or welfare (504).

In previous analyses of fiscal discourses in party manifestos, researchers focused mostly on welfare expansion or limitation (codes 504 and 505: Garritzmann and Seng 2020, McManus 2019) and equality (codes 503 and 504: Aaskoven 2020). Statements calling for a reduction of the state apparatus are often coded with *303: Governmental and Administrative Efficiency*.

3.2 Variables

Sentences coded other than 409 or 414 do not necessarily refer to questions about the financial aspects of policies, but can be of qualitative nature, too. For these reasons, a second categorization of topics within the party programs is conducted. This implements a *BERTopic model* approach (Grootendorst 2022), which is a method to cluster text fragments into groups of similar topics. BERTopic is a powerful and flexible topic modeling technique that offers several advantages over traditional models like Latent Dirichlet Allocation (LDA). Unlike

LDA, which relies on word co-occurrence patterns, BERTopic uses transformer-based embeddings (BERT, SBERT, etc.) to capture semantic relationships between words (Egger and Yu 2022). This results in more coherent topics, and a better handling of polysemy, because different meanings of the same word are distinguished. Its flexibility, multilingual capabilities, and contextual understanding make it suitable for analyzing political manifestos and debates on austerity and budget policies.

The BERTopic model is initialized with several custom settings, such as multilingual support. This is necessary, since the standard topic extraction of BERTopic handles texts in English. The embedding model "`distiluse-base-multilingual-cased-v1`" is a sentence transformer based on DistilBERT (Reimers and Gurevych 2019), which is a lighter and faster version of BERT while maintaining strong performance. The amount of n-grams is set to 3. This results in single words (*Haushalt*), bigrams (*öffentlicher Haushalt*) and trigrams (*öffentlichen Haushalt konsolidieren*) being extracted. To reduce noise from small and irrelevant topic clusters, the minimum topic size is set to 20. The *UMAP* model reduces high-dimensional text embeddings into a lower-dimensional space while preserving their structure. Similar topics are then clustered into distinct topics with the *HDBSCAN* model.

This approach results in 225 total topics for the entire dataset. Observing the results exposes thematic clusters relevant for the research. These contain terminology to describe debt and budgets, privatization and public investment. They are listed in table 1. The most important topic for this analysis is topic 34, which is labeled as *debt*. The topic model approach worked extraordinary well, because multiple terms related to debt or indebtedness are detected. The model’s context awareness has its limits, though. Table 3.2 shows this exemplary: the fourth statement mistakenly detects *Schulden* (German for debt), because it fails to recognize its double meaning. In this context, it does not refer to debt, but to *verschulden* as in culpability.

While these clusters show that parties talk about these issues in their programs, the topics on their own are insufficient to observe a party’s stance towards austerity. This question may be answered with assistance of the annotations from the CMP. The idea here is to combine the topic model with the CMP codes to observe the party’s position on state expenditure. To exemplify this, figure 3.1 presents the most frequent terms among sentences labeled with CMP category 605: *Law and Order* and topic 9 from the topic model, which clusters statements

Party	Year	CMP code	Statement
SPD	2013	414: Economic Orthodoxy	<i>Die finanziellen Mittel für die Rückkehr zu einer wachstumsorientierten Wirtschaftspolitik dürfen dabei allerdings nicht durch neue Schulden aufgebracht werden sondern durch die gerechte Besteuerung der Finanzmärkte.</i>
ÖVP	1995	<i>Missing</i>	<i>Tatsächlich ist es jedoch in den zwölf Monaten der Regierung Vranitzky III bislang nicht gelungen das gemeinsam gesteckte Ziel einer ausgabenseitigen Budgetsanierung zu erreichen.</i>
CDU	2009	414: Economic Orthodoxy	<i>Dafür haben wir die Schuldenbremse im Grundgesetz auch gegen Widerstände verankert.</i>
Greens AU	2013	503: Equality: Positive	<i>Deshalb fordern wir die Abschaffung der Verschuldensscheidung und des verschuldensabhängigen Unterhalts.</i>

Table 3.2: Sample statements from topic 34

around tax policy. The result are a combination of terms to describe tax fraud and evasion.

The intersection of CMP codes with generated topics from the BERTopic model show insights into the attitude of German and Austrian political parties towards public spending and debt. It will serve as the dependent variable of this analysis and takes the dimension **-1 for austerity, 1 for increased expenditure and 0 for statements unrelated to household policy**. The labels were assigned following a semi-automated approach. The dataset containing the total amount of statements was filtered for different combinations of CMP categories and topics. Those intersections that proved to contain a majority of statements which could be categorized in either of the two classes received a corresponding label. Some combinations of topics were highly dependent on context. A small share of statements was therefore labeled manually.

The combinations tell a lot about the diverse nature of fiscal policy making. Statements about the EU, classified in the *debt* or *money amounts* cluster, could contain positions opposed to the idea of a tax union, but they may also take a stance against European fiscal rules as the Maastricht criteria. The complete coding scheme is attached to the appendix in table 2.

tion with a stratified split to maintain class distribution. As pro-expenditure statements are underrepresented, `WeightedRandomSampler` is used, assigning higher sampling probability to minority classes to ensure balanced learning. Training follows a standard supervised machine learning approach. The model takes an input (a sentence embedding) and passes it through different layers of the neural network. Each layer transforms the data step by step, eventually producing a set of probabilities for each possible label. The label with the highest probability is the model’s prediction (Van Attevelde et al. 2022).

The input to the model is a 512-dimensional sentence embedding generated by SBERT. Each sentence in the dataset is converted into a dense numerical representation, capturing its meaning. These 512 numbers are passed into the neural network as the feature vector for classification. In the hidden layer, 1024 neurons with ReLU activation extract patterns from the data. The Dropout layer reduces overfitting by randomly setting activations to zero. Finally, the output layer produces logits for three classes.

The model’s predictions are compared to the correct labels using a loss function. The loss function, in this case, `CrossEntropyLoss`, tells us how far off the model’s predictions are from the actual labels. A higher loss means the model is making more mistakes. To improve, the model needs to adjust its internal settings which are called weights. This is done through gradient computation. The model calculates how much each weight contributed to the error. Using an algorithm called backpropagation, the error is sent backward through the network, showing each layer how it needs to change. The goal is to reduce the loss, meaning the model gets better at making correct predictions.

Once the model knows how much to change, an optimizer (like `AdamW`) updates the weights to make better predictions next time. The optimizer ensures that adjustments are made efficiently, preventing the model from overfitting, which means overreacting to small errors. This process (forward pass, loss calculation, backward pass, and optimization) repeats many times over the dataset. Each full cycle through the dataset is called an epoch. Over hundreds of epochs, the model improves and makes fewer mistakes. PyTorch’s `CosineAnnealingLR` gradually reduces the learning rate over 300 epochs. Thus, premature convergence is prevented.

After training, the model is tested on new, unseen data. Since the validation data wasn’t used in training, it helps us see if the model has actually learned meaningful patterns or if it is just memorizing the training examples. The model’s performance is measured using metrics

like F1-score, accuracy, precision, and recall. The version of the model that performs best on the validation set is saved for later use. Validation occurs after each epoch. Performance is assessed by using Accuracy, F1-score and Precision & Recall. To track performance, the best model based on validation F1-score is saved. This ensures that the final model is optimized for real-world generalization.

The training F1 score of 0.8560 and validation F1 score of 0.7810 indicate that the model is performing well on the training data and generalizing reasonably well to the validation data, implicating to overfit to a slight, but acceptable extent.

4 Discussion

Presentation of Results

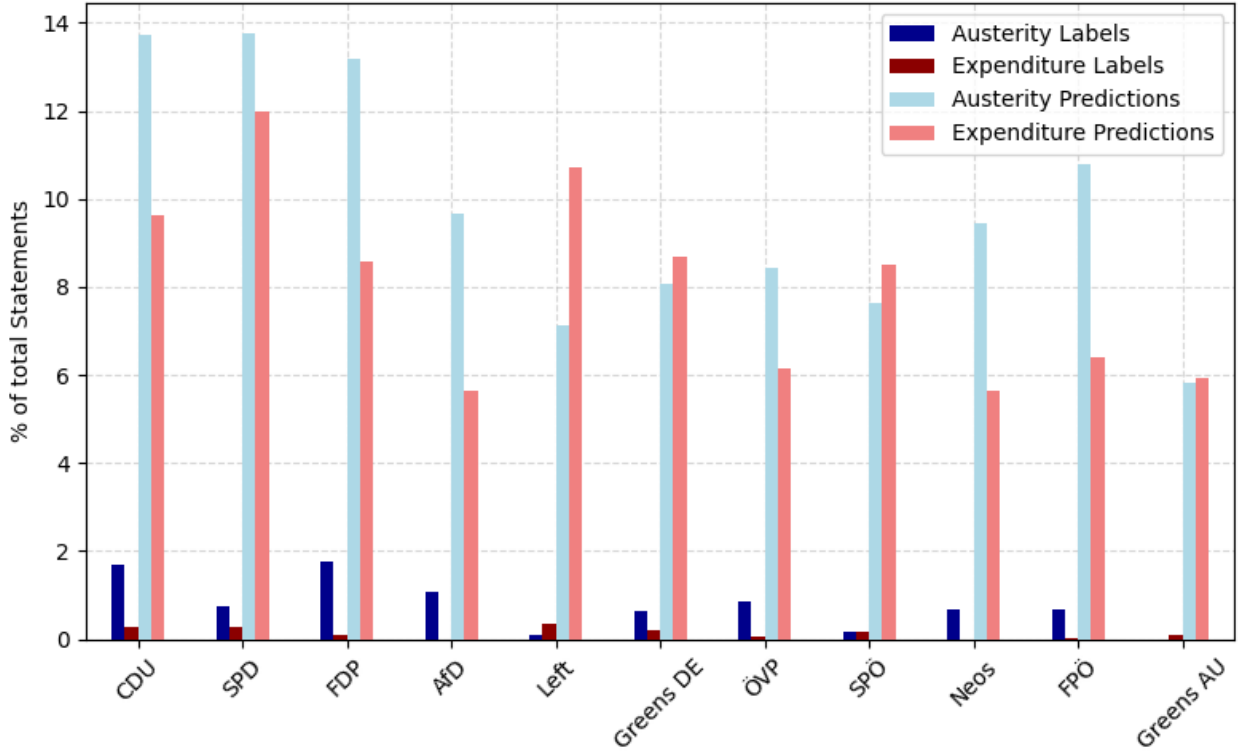


Figure 4.1: Total amount of statements on household policy by party (training data and predictions).

4.2 presents the distribution of labels per party and appends the predictions from the training model. The dependent variable shows a clear tendency for each party, which fits most parties political profile. Among parties dedicated to economic liberalism, a dominance of pro-austerity measures is clearly visible. The AfD and Neos do not have any statements promoting increased public spending at all. For German center-left parties (Social Democrats, Greens) the positions are more balanced, but the tendency is the same. The only parties with a distinct majority of pro-expenditure statements is The Left party in Germany and The Greens from Austria, which didn't have any pro-austerity labels at all.

Comparing the predefined labels with the result of the training model shows similar tendencies for each party. Both Green parties have balanced distribution of statements

referring to budget policy. The polarization is not as pronounced as for the predefined labels. This could be partially caused by inaccuracies of the model. It recognizes that a statement is related to the topic of public spending, but partially fails to correctly identify which political position is implied. The general trend, however, suggests that the model works sufficiently.

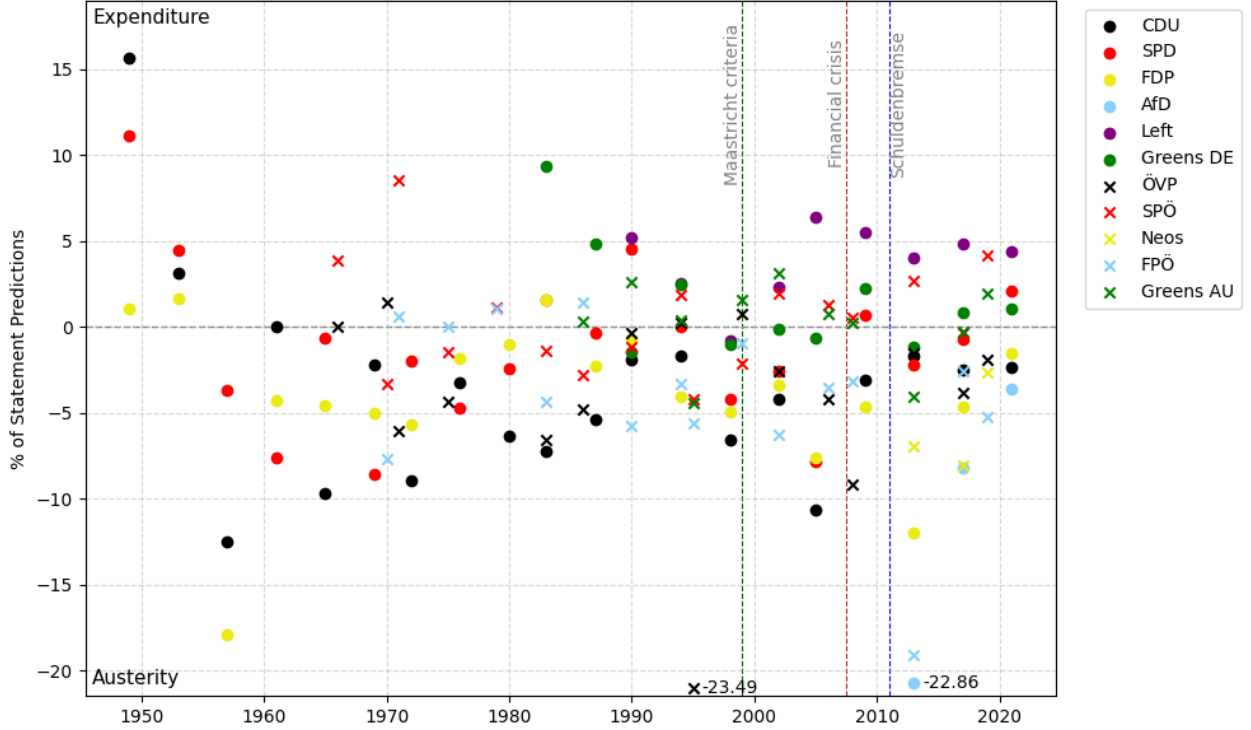


Figure 4.2: Predicted party positions towards household policy.

Figure 4.2 visualizes the predicted positions for each political party over time. Each dot represents the mean of all label predictions in a single party manifesto. A party program with 10% statements that are likely to promote austerity would, for example, score at $Y = -10$. For simplicity reasons, the NEOS were colored yellow (and not pink), in order not to confuse them with The Left. Politically, the *New Austria and Liberal Forum* are closer to the (yellow) FDP's values.

In general, most positions that were predicted support austerity. Earlier than the 1980s, positions on austerity and expenditure appear scattered, with some parties leaning towards increased spending and others supporting austerity. From 1975 until the mid-2000s, austerity positions are relatively underrepresented. This could be an indicator for increasing public deficits in the context of what Streeck described as the *debt state*. Since the 1990s, there seems to be a more centrist convergence, with most values clustering around zero. This

either suggests a balanced discourse on household politics or less attention drawn to the issue. The distribution widens after 2005 with more parties taking a clear stance towards government spending and debt. During the fiscal crisis 2011-2013, most positions shifted towards austerity, with the ÖVP and The Left as exceptions. These positions softened in 2021, possibly as a reaction towards the challenges of the COVID-19 pandemic.

The model shows that economically liberal parties, like CDU, ÖVP, FPÖ, NEOS and FDP, are likely to hold austerity positions. An exception is the CDU's party program from 1949, that scores highest on the chart on expenditure positions. The FDP in the 1970s and 80s seemed not to be in favor of either restricting or expanding state budgets. The two social-democratic parties show a mixed stance over the entire time frame, while the SPÖ seems to have a more positive attitude towards spending. Especially in the 1960s, the SPD seems to have been more in favor of austerity measures than its Austrian counterpart. These positions on decreased public spending can also be observed from 1998 until 2005 among German Social Democrats. This is interesting since this marks the period of chancellor Schröder's administration which introduced the controversial Hartz reforms to relieve state budgets.

The Greens in both countries follow neutral positions, with the German party being more in favor of expenditure policies before the 2000s. The Left party's statements, grouped with PDS's, are almost entirely on the positive side, opposing austerity and advocating for increased social spending. There are two exceptions in 1998 where their value is slightly below 0.

An interesting case are the statements in programs by the right-wing populists, the AfD and FPÖ. At the time of the AfD's first election in 2013, the party was holding strong positions on reducing public spending. The FPÖ has a likewise negative attitude towards public debt and scored the second lowest value in the model. While maintaining a pro-austerity attitude, the right-wings' positions are less pronounced in later election programs. This possibly indicates a shift towards other topics in the parties' profile.

So far, the party's positions over time have been examined. Now that the polarization has been estimated, it's possible to question the motivation behind cutting or increasing public spending. This is done by combining the predicted labels with the CMP categories for contextual depth. 4.3 shows this relation for all statements with a predicted label of -1 or

1. The reason to group several years together is that in 2002, 2003 and 2017, both Austria and Germany held elections. This increases the amount of party manifestos in these years so that the amount of statements would naturally be higher. Joining the years where only one of the two country held elections avoids distorting the results through double counting.

Party	Statement
SPD	<i>In unserer Regierungszeit haben wir mit dem Programm Moderner Staat & Moderne Verwaltung den Wandel des hoheitlichen Staates zu einem kundenorientierten Dienstleistungsunternehmen eingeleitet.</i>
CDU	<i>Wir werden die Rücklagen schonen die die Auswirkungen der demografischen Entwicklung abmildern und die Stabilität der Beiträge absichern.</i>
FPÖ	<i>Der Bürokratie und Verwaltungsaufwand, den insbesondere die heimischen Klein und Mittelbetriebe zu bewältigen haben, stellte eine gewaltige zusätzliche finanzielle Belastung dar.</i>

Table 4.1: Pro-austerity statements in 2002 manifestos related to government and administration efficiency

Party	Statement
The Left	<i>Die neoliberale Politik von Privatisierung Spekulation und unsozialer Kürzungspolitik wollen wir beenden.</i>
The Left	<i>Wir werden jährlich über 120 Milliarden Euro in die öffentliche Daseinsvorsorge und Infrastruktur investieren.</i>
SPÖ	<i>Mehr öffentliche Investitionen in wichtige Bereiche wie Kinderbetreuung den Ausbau der fach und hausärztlichen Versorgung.</i>

Table 4.2: Pro-expenditure statements in 2017 manifestos related to welfare expansion

From 2002 onward, positions in favor of austerity were represented within the context of governmental and administrative efficiency. This could be seen broadly in the scope of *Agenda 2010* under the Schröder administration, which aimed for a more efficient welfare state (Armingeon and Baccaro 2015, p.3). In 2011, the *debt brake* took effect as an amendment for balanced state budget in the broader context of the European Fiscal Crisis. This is likely to have shaped party positions, as statements following economically orthodox principles condensed significantly in 2013. On the other hand, positions in favor of increased public spending have increased since then, especially in fields of welfare state, market regulation and a positive attitude towards equality. Furthermore, parties likely saw a need to

foster investments in technology and infrastructure. The pro-austerity labeled statements also incorporated a growing share of positions on the European Union, most of them being EU-friendly. Their interpretation is complex, though. While some statements may refer to the aversion of a debt union, others might call for the importance to comply to EU obligations regulating debt limits.

4.1 Discussion

Over the course of this research in March 2025, several events of great magnitude reshaped the face of fiscal policy in both countries. In late 2024, the governing coalition in Germany formed by SPD, Greens and FDP failed due to unsolvable conflicts about the *debt brake's* continuance. After the snap election held in February 2025, SPD and CDU agreed to form a coalition. To what is known until now, the parties agreed on a 500€ billion fund for investments into defense and infrastructure. Precondition for that was the easing of the debt brake through parliament on the 18th of March (Deutscher Bundestag 2025).

In Austria, disagreements over budget policies were likewise a substantial factor for the failing coalition building earlier this year. The initial coalition talks between the ÖVP, SPÖ, and NEOS failed in January 2025, primarily due to significant differences in budget policy and financial planning. While the SPÖ was willing to compromise, particularly on wealth and inheritance taxes, there remained fundamental disagreements between the parties regarding budget consolidation. The coalition negotiations between the FPÖ and the ÖVP collapsed in February 2025 due to major fiscal policy differences between the parties. The FPÖ demanded extensive tax cuts, increased national debt, and a reduction in Austria's contributions to EU financial mechanisms. These positions clashed with the ÖVP's commitment to budgetary discipline and compliance to European fiscal frameworks (Chris Lunday 2025).

This research showed the dynamic positions of political parties towards fiscal policies shifted over time in both countries. By combining BERTopic-generated topics with CMP categories, the analysis captures latent patterns in fiscal discourse. The analysis connected fiscal policy positions to specific policy narratives, such as "efficiency" (for austerity) and "equality and investment" (for spending). This reinforces the idea that fiscal debates are shaped not just by economic considerations but by political discourse and framing strategies.

The results confirm that austerity has become a dominant position in German (and Austrian) politics, particularly after the 2008 financial crisis and the introduction of the debt brake in 2011.

This constitutional rule, aimed at limiting public debt, reflects Germany's strong stability culture and consensus across most political parties, except The Left. Hübner showed how the German *Stability Culture* was shared not only by conservatives but also by social democrats since the 2000s (2015, p.10). After all, the debt brake was not only supported, but co-designed by the German Social Democrats. It likely reinforces a more disciplined and austerity-focused discourse in Germany compared to Austria. While fiscal rules might potentially depoliticize budgetary decisions, they themselves have become contested (Aaskoven 2020). This is evident in the varying party positions during key periods, such as the fiscal crisis. Around the debt brake's enacting in the midst of the Fiscal Crisis, pro-austerity positions were in the majority. These positions softened in following elections, reaching an all time low in 2021. COVID-19 pandemic could have contributed to questioning the debt brake's contemporary legitimacy.

The fact that center-left parties showed mixed positions suggests that traditional left-right cleavages are less reliable indicators of fiscal positions. This matches the arguments made by McManus and Garritzmann and Seng (2019, 2020). The Left in Germany, however, reliably held up pro-spending positions. The Austrian Green Party and SPÖ showed a more distinct tendency towards expenditure than their German counterparts. This could be seen as a compensation for the absence of a far-left party in Austrian parliaments. In Austria, fiscal policies appear less rigidly tied to such rules, allowing for a broader spectrum of positions. For example, Austrian Social Democrats (SPÖ) have historically shown a more positive attitude towards spending, contrasting with the German SPD's occasional leanings towards austerity, especially during Chancellor Schröder's administration.

The analysis furthermore suggests that the euroscepticism of right-wing parties like the AfD and FPÖ is closely tied to their pro-austerity stances during the European fiscal crisis. Their critique of EU fiscal policies is based on seemingly contradictory principles. On the one hand, the parties show strong positions on reducing debt and public spending, striving for a leaner public administration (Wren-Lewis 2016). This aligns with Eu-wide fiscal guidelines, like the Maastricht criteria. On the other hand, they reject the notion of EU-wide financial cooperation and solidarity (Rump 2022). This opportunistic alignment with austerity likely

served to reinforce their eurosceptic narratives, appealing to voters concerned about economic stability and sovereignty. However, the analysis also indicates a shift in focus for these parties in later years, with their austerity positions becoming less pronounced.

4.2 Reflection

While the F1 score of the training model suggests that the model performs reasonably well, manual examination certainly reveal several inaccuracies of the classification process. The insufficiency of labeled data is a significant issue. With only 1,000 entries, the model’s training is constrained, leading to potential inaccuracies. Incorrect labels further contribute to this issue, as they heavily distort the learning process. The model’s difficulty in categorizing political intent also stems from the inherent complexity of language. Words like ”verschulden” carry multiple meanings, in this case, to become indebted and to be culpable for something.

The dynamic nature of political language poses another challenge. As parties adopt new terminology over time, models trained on outdated data may fail to recognize shifts in discourse. This could explain historical anomalies, such as the CDU’s pro-expenditure stance in 1949.

Another issue is the quality of CMP annotations. The CMP coding process, reliant on trained human coders, has significant issues with misclassification and reliability. Even experienced coders frequently misclassify text units into incorrect categories. Tests revealed poor agreement among coders, with reliability coefficients far below the standard threshold of 0.8, indicating systemic unreliability in the coding process (Mikhaylov et al. 2012).

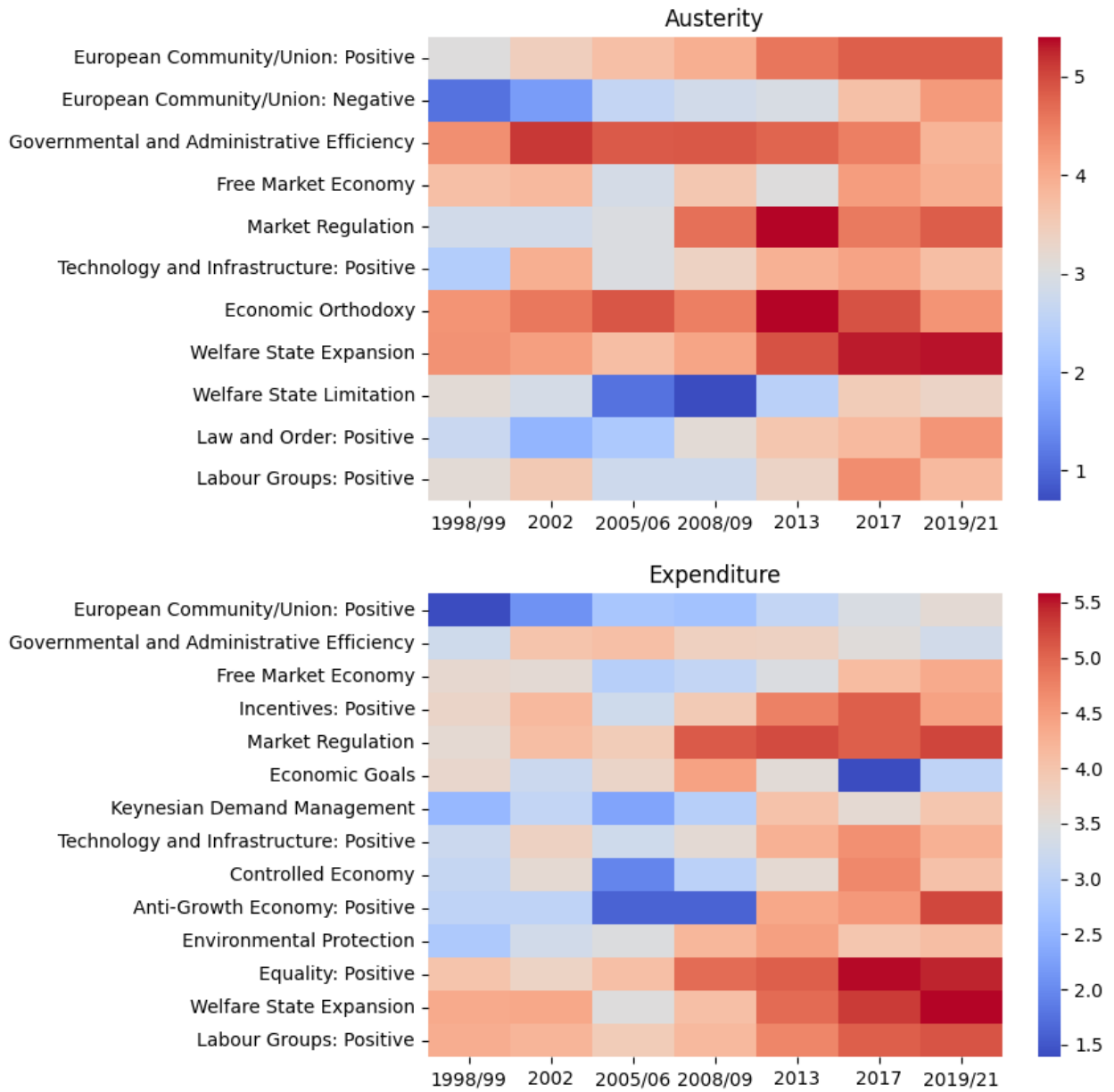


Figure 4.3: Intersection of predicted positions with CMP categories (logarithmic values).

5 conclusion

This paper examined the political foundation of Germany and Austria's fiscal policies and the tension between ideological commitments to austerity and the pragmatic need for flexibility during crises. The results reveal a stable consensus about the necessity of austerity among most German parties, with The Left as an exception. Towards 2021, this paradigm might shift. In Austria, this perception of sound finances is shared by the ÖVP and FPÖ. The latter, along with the AfD from Germany, shared strong positions pro-austerity during the European fiscal crisis which were accompanied by a critical view of the European Union. By tracing these shifts, the study contributes to a broader understanding of the evolving nature of fiscal conservatism in Europe and the factors that drive states to both encourage and reject austerity measures. Both countries' recent cases show how debates about the long-term sustainability of austerity measures are contested.

Further research on the issue should focus on the balance between debt and taxation as mechanisms for state financing. Examining the distribution of positions across the political spectrum will help to understand the ideological foundations of fiscal policies and their potential impact on economic growth and public welfare. Incorporating the debt-to-GDP ratios of various countries will provide a quantitative foundation to assess the sustainability of these fiscal strategies. Additionally, extending the analysis to Southern Europe will offer valuable insights into regional disparities and recovery trajectories. Southern European countries, often characterized by higher debt levels and reliance on tourism, present unique challenges and opportunities in the context of EU budgetary rules and economic convergence.

Appendix

Topic Number	Count	Custom Name	Representation
9	1277	Taxes	'steuersystem', 'das steuersystem', 'steuer-systems', 'steuerreform', 'steuern und abgaben', 'des steuersystems', 'besteuert werden', 'steuerhinterziehung', 'spitzensteuersatz', 'steuereinnahmen'
34	369	Debt	'schuldenbremse im grundgesetz', 'staatsschulden', 'staatsverschuldung', 'die staatsverschuldung', 'staatsschuldenquote', 'schuldenbremse im', 'schuldenbremse', 'die schuldenbremse', 'neuen schulden', 'neue schulden'
65	198	Privatization	'privatisierung von öffentlichem', 'privatisierung von öffentlichen', 'zur privatisierung', 'die privatisierung', 'die privatisierungen', 'die privatisierung von', 'zu privatisieren', 'der privatisierung', 'privatisierung die', 'privatisierung ist'
69	189	Money amount	'15 milliarden euro', 'milliarden euro', '30 milliarden euro', '15 milliarden', 'millionen euro', 'million euro', '30 milliarden', 'milliarden', 'milliarden dm', 'milliarden schilling'
101	109	Public investments	'müssen öffentliche investitionen', 'öffentliche investitionen unternehmerischer', 'öffentliche investitionen', 'private investitionen', 'für private investoren', 'private investoren', 'investitionen unternehmerischer', 'investitionen in', 'investitionen in die', 'investition in'

Table 1: Topics related to public budget policy

	Taxes	Debt	Privatization	Money amounts	public investment
constitution +	0	X	0	0	0
constitution -	0	X	0	0	0
controlled economy	-1	X	0	0	0
culture +	0	X	0	1	0
democracy	0	X	1	0	0
economic goals	X	X	X	X	X
economic growth +	0	X	0	-1	-1
economic orthodoxy	-1	-1	-1	-1	-1
education +	0	X	0	1	1
environmentalism +	0	X	0	1	1
equality +	0	X	1	1	1
europe +	0	X	0	0	0
europe -	0	X	0	0	0
free market economy	0	X	-1	0	0
gov-admin efficiency	0	X	-1	-1	0
internationalism +	X	X	X	X	X
internationalism -	0	X	0	0	0
keynesian demand management	1	1	1	1	1
law and order +	0	X	0	0	1
market regulation	0	X	1	-1	0
national way of life +	0	X	0	0	1
nationalisation	0	X	1	0	1
political authority	0	X	0	-1	0
political corruption	X	X	X	X	X
welfare +	0	X	1	1	1
welfare -	0	X	0	-1	0

Table 2: Coding scheme of intersecting categories.

The columns show topics generated by the BERTopic model. -1 = pro-austerity, 1 = anti-austerity. 0 = unrelated to fiscal policy. X = content dependent, coded manually. For more information see Volkens et al. 2020.

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Declaration of Authorship

I, Jacob Blum, declare that this thesis titled, title and the work presented in it are my own.

I confirm that:

- This work was done wholly or mainly while in candidature for a research degree at this University.
- Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.
- Where I have consulted the published work of others, this is always clearly attributed.
- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.
- I have acknowledged all main sources of help.
- Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.



Signed:

Date: April 1, 2025
