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Master Thesis

Exploring the Influence of Migration News Consumption
on Respective Attitudes and Political Perspectives through
Deep Learning and Digital Trace Data Analysis

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1 Introduction

Migration has emerged as a pivotal and contentious issue in Western countries, sparking intense debates driven by events such as the refugee crisis of 2015 and the ongoing conflict in Ukraine. These occurrences, coupled with the ascent of populist and radical-right parties, have brought immigration-related topics to the forefront of political discourse across Europe and other Western democracies (Hobolt 2016; Schmuck und Matthes 2017; McLaren et al. 2018).

During crucial events such as Brexit and the 2016 U.S. Presidential election, the perceived threat posed by immigrants often took center stage, articulated and amplified as a significant concern (Goodwin und Milazzo 2017; Hooghe und Dassonneville 2018; Joppke 2020). This trend is evident in right-wing populist groups, for example by the rise of the German party Alternative for Germany (AfD) since its inception in 2015 (Forschungsgruppe Wahlen, 2022). These groups consistently garner support by making anti-immigration sentiments a central theme of their agendas (Müller und Bach 2023; Müller und Schulz 2021; Schultz et al. 2021).

In the contemporary political landscape, immigration has become a paramount concern for the electorate in many European countries (Heath und Richards 2016). Research indicates a growing prevalence of negative attitudes toward immigration (Heath et al. 2020). Central to understanding the dynamics of these attitudes is the role of the media. As the primary source of news and political information for many in developed countries (Shehata und Strömbäck 2014), the media has considerable influence in shaping perceptions of immigration and contributing to the rise of populist sentiments (Štětka et al. 2021; Jacobs et al. 2016; Schemer 2012; van Klingeren et al. 2015).

Acknowledging the media's role in shaping public opinion, scholars have increasingly explored the link between media coverage and anti-immigration sentiments (Boomgaarden und Vliegenthart 2007; Bos et al. 2020; Matthes und Schmuck 2017; Wirz et al. 2018). Numerous studies highlight how media framing consistently portrays immigration in negative terms, associating it with criminality, terrorism, and economic burdens (Eberl et al. 2018; Lawlor und Tolley 2017; Georgiou und Zaborowski 2017). However, existing research has limitations, often relying on cross-sectional data that hinders causal inferences. Additionally, the conventional approach of relying on self-reported media use in surveys may lead to an underestimation of actual media consumption (Scharkow und Bachl 2017).

Furthermore, there are hardly any studies that examine alternative media in more detail, although according to Theorin & Strömbäck (2020) they have a much stronger influence than conventional news.

This study addresses these shortcomings by employing a panel study with three waves and utilizing internet tracking data to investigate the impact of migration-related articles from both conventional and alternative media sources. In addition, this is the first study in this context to create and use a classifier to recognise immigration-related articles in the tracking data.

2 Theory and State of Research

A comprehensive overview of the subject is provided by the literature review conducted by Eberl et al. in 2018, which covers the impact of media portrayal of immigrants on attitudes toward them. This review encompasses an analysis of 78 published studies up to that point. It is to be noted that there is a fivefold increase in publications on this topic between 2010 and 2018. While these studies, along with subsequent papers, differ in methodology, data sources, and focus, most of them are grounded in two dominant theories: agenda setting and framing theories (Eberl et al. 2018; Štětka et al. 2021).

2.1 Agenda Setting and Framing Theory

The Agenda Setting Theory, formulated in the 1960s and 1970s in the American context, postulates that media serves as a central information source in political discourse. This theory assumes that statements from the media are generally accepted as true by the population. With this premise, the theory suggests that the media's selection and frequency of coverage strongly influence the public's perception of specific issues (McCombs und Shaw 1972; Maurer 2022). This influence extends to the perceived importance of the issue and knowledge about it (McCombs und Valenzuela 2007; Vreese und Boomgaarden 2006).

In the context of the media portrayal of immigration-related topics, it is assumed that the media's frequency of covering these issues, irrespective of the specific content, significantly influences attitudes toward immigrants and immigration. This effect is observed in studies where an increase in the number of consumed articles leads to an overestimation of the criminal activities of migrants (Aalberg et al. 2012; Boomgaarden und Vliegenthart 2009; Schemer 2012). Numerous studies confirm the negative impact of the number of articles on attitudes toward immigrants, even when controlling for current events and framing (Klingeren et al., 2015).

This influence is also evident in related dependent variables, such as attitudes toward the European Union (Harteveld et al. 2018), and notably, a higher likelihood of voting for right-populist parties (Boomgaarden und Vliegenthart 2007; Burscher et al. 2015; Bos et al. 2011; Walgrave und Swert 2004). Voters for these parties may expect them to address perceived problems effectively (Boomgaarden und Vliegenthart 2007). This pattern is consistent across 11 European countries, as shown in a panel study (Burscher et al. 2015).

The Framing Theory focuses on how media portray specific issues, whether positively or negatively, and the effects of such portrayals. A study across 16 Western democracies identifies immigration as one of the most negatively portrayed topics in the media particularly depicting refugees in a negative light, often framing them like a natural disaster affecting Europe (Charteris-Black 2006; Gardikiotis 2003; Gabrielatos und Baker 2008).

The negative impact of such portrayals is evident in an experimental setting where different versions

of news, presenting refugees either as "innocent victims" or "intruders," lead to varying perceptions of the same photo (van Gorp et al. 2009). Non-experimental studies also confirm the effect, with negatively framed articles worsening attitudes toward immigrants, while positively framed articles improve them. This is attributed to perceived threats posed by immigrants, whether economic, cultural, or security concerns (Schemer 2012; Schlueter und Davidov 2013; McLaren et al. 2018). A multi-country study further establishes that consuming negatively framed migration articles correlates with increased rejection of immigrants (Wirz et al. 2018). Contrary findings from a study in Germany, spanning from 1993 to 2005, suggest a minimal effect, though it's crucial to note that this study predates the refugee crisis (Boomgaarden und Vliegenthart 2009).

Similar to the Agenda Setting Theory, the Framing Theory also influences the likelihood of voting for populist parties, particularly when consuming negatively framed migration articles (Hameleers 2019). In a comparison of the two theories, the Framing Theory emerges as the more influential one (Boomgaarden und Vliegenthart 2009; Schemer 2012; van Klinger et al. 2015; Wirz et al. 2018). While this study, due to limited data, cannot explore effects across different migrant groups, it's crucial to acknowledge its significance. In Western Europe, intra-European immigrants are often underrepresented in media coverage, while asylum seekers are frequently overrepresented (Ruhrmann et al. 2006). This distinction is important as studies indicate that non-European migrants are more often associated with crime than EU migrants (Ruhrmann et al. 2006; Jacobs 2017).

2.2 Media Effects

In summary, media reports on immigration, solely due to their quantity, have negative effects on the perception of migrants, especially when negatively framed. This is attributed to an overestimation of the number of immigrants and media's tendency to focus on problems and negative aspects (Meeusen und Jacobs 2017; Müller et al. 2017). Migrants are often disproportionately portrayed as criminals and perceived as more threatening than national criminals (Jacobs et al. 2016).

The choice of media forms, such as television, radio, newspapers, online articles, or social media, also plays an important role. Regarding television news, the literature distinguishes between commercial and public television. Most studies show a significant correlation between consuming commercial television and negative attitudes toward immigrants, while public television consumption has no significant effects (Jacobs et al. 2016; Beyer und Matthes 2015). Some studies even suggest a positive effect of consuming public television on attitudes toward immigrants (Beyer und Matthes 2015).

Newspapers, particularly the distinction between qualitative newspapers and broadsheets or tabloids, also show varying effects. Most studies highlight the negative portrayal of immigration in broadsheets and tabloids, with tabloids often presenting a more negative view (Gabrielatos und Baker 2008; Eberl et al. 2018; Reinemann et al. 2012). However, some studies find no differences in the portrayal of the topic between tabloids and broadsheets (Carvalho et al. 2015; Greussing und

Boomgaarden 2017).

Comparative studies across different media forms generally yield consistent results. For instance, a large-scale study across several countries establishes a connection between populist attitudes and the consumption of tabloid newspapers and commercial television (Schulz 2019). Other investigations incorporating various media forms confirm these effects for all forms, emphasizing that the influence of television and newspapers is most pronounced (Burscher et al. 2015; Walgrave und Swert 2004). However, some studies, such as the one of Watson and Riffe (2013), demonstrate the impact of online news, with no comparable effects observed for television or newspaper reading. Despite similarities in media effects across most areas, it is essential to compare the differences in media forms.

Noteworthy is a Czech paper, the only one so far to utilize a two-wave panel study combined with tracking data of respondents' media consumption instead of relying solely on self-reports (Štětka et al. 2021). According to this study, consuming migration articles in commercial television and online news increases the likelihood of supporting right-populist parties. However, concerning attitudes toward immigrants, an effect is only observed for television consumption, where watching public service media leads to more favorable attitudes toward immigrants, while consuming commercial television amplifies anti-immigration attitudes.

2.3 Alternative News

Alternative news, align more with tabloids, broadsheets, or commercial television than their counterparts but require a distinct definition and separate consideration. Alternative media attempt to present itself as conventional news outlets but do not adhere to editorial norms, spreading subjective perceptions or deliberate falsehoods (Lazer et al. 2018). Many of these media are associated with the political right and characterized by an anti-immigration rhetoric (Atkinson und Leon Berg 2012).

So far, there only exist limited studies examining alternative news. An exception is a study by Schulz (2019), demonstrating that consuming such media is associated with a critical view of immigration. A recent and extensive study by Theorien and Strömbäck (2020) delves into the effect of alternative media, considering both right-wing and left-wing sources. According to the authors, the effects of traditional media are generally minimal and often not significant after controlling for other relevant variables. The effects were examined in relation to attitudes toward immigrants and the perceived impact of immigration, a distinction the authors argue receives insufficient attention. As expected, these dependent variables are negatively influenced by right-wing alternative media and positively by left-wing alternative media. This emphasizes the relevance of this media in an era where alternative outlets are gaining traction (Benkler et al. 2018). For this reason, alternative media and their effects are a key focus of this analysis in comparison to conventional media.

2.4 Research Questions and Hypothesis

Drawing upon existing theories and studies on this subject reveals a noticeable trend. However, uncertainties and variations persist. These arise from divergent approaches to methodology, data, variables, their preparation, and disparities in country-specific studies. The predominant limitations include the disproportionate reliance on longitudinal data that excludes direct causal inferences and the use of self-reported measures for media consumption rather than direct observation. Additionally, the choice of media forms varies across studies, with alternative media receiving minimal scrutiny. Furthermore, the selection and quantity of pertinent control variables differ from one study to another, exerting an additional influence on the outcomes.

For these reasons, this analysis at hand employs panel data encompassing three waves and supplementary internet tracking data from this period to directly observe media consumption. However, due to inherent limitations, this analysis can exclusively investigate online media consumption, excluding a comparison with television and radio consumption. In particular, this study stands out as one of the few to emphasize the role of alternative media. In contrast to the only known study utilizing both panel and internet tracking data (Štětka et al. 2021), this study utilizes a panel with three waves and identifies migration-related articles not solely based on keywords but also employs a purpose-built BERT-classifier specifically designed for this purpose.

In alignment with appropriate theories and existing literature, this study addresses two pivotal research questions. The first one focuses on the general media consumption of migration-related articles and their effects.

RQ1: How does the media consumption of migration-related articles influence attitudes toward immigrants and sympathy toward the German right-populist party AfD?

Two central hypotheses can be formulated here:

H1: The higher the consumption of migration-related articles, the greater the rejection of immigrants.

H2: The higher the consumption of migration-related articles, the greater the sympathy toward the AfD.

The second central research question pertains to alternative media and the effects of their consumption in line with the Framing Theory.

RQ2: Are there differences in media-effects through the differentiation of alternative and traditional media?

Two central hypotheses can also be formulated for this question:

H3: Consumption of alternative media increases rejection toward immigrants.

H4: Consumption of alternative media increases sympathy toward the AfD.

3 Research Design

3.1 Data

The study at hand utilizes data from a four-wave survey conducted before and after the 2021 German federal election (September 26) together with its corresponding web-tracking data (Bach et al. 2023). During the period spanning July to December, participants in the survey were instructed to use a plug-in that recorded their browsing activity on both personal computers and mobile devices. The analysis focuses on the initial three waves, which comprise attitudinal measures essential for this thesis. Waves 1 and 2 were administered in the weeks leading up to the federal elections on September 26: Wave 1 from August 30 to September 7, Wave 2 from September 14 to 20, and Wave 3 immediately thereafter (September 27 to October 4). Quotas based on age, gender, and state of residence were implemented to align with the demographic composition of adults residing in Germany eligible to vote in the 2021 election. Following data filtering procedures, which involved eliminating missing values for covariates, ensuring exposure to classified migration news or other classified news, and active participation in at least two waves for longitudinal estimates, the final sample comprises 1,452 individuals. Additional details regarding the sampling procedure and sample characteristics can be found in Appendix A.

3.2 Operationalization of Key Variables

To examine the representation of migration topics in both mainstream and alternative news media, and to assess the potential impact of such coverage on individual attitudes, it is essential to gather information across three main dimensions. Firstly, comprehensive data on the content of news articles from both mainstream and alternative sources is required, allowing subsequent classification as migration related articles. Secondly, it is crucial to acquire data detailing which individuals were exposed to this content and the duration of such exposures. Lastly, a range of measures pertaining to the political and migration related attitudes of these individuals, along with their socio-demographic characteristics, must be obtained. Combining this information is made possible through the survey panel and the accompanying web-tracking data. The following sections provide detailed insights into each data type, outlining the methodologies used to obtain them.

3.2.1 News Media Coverage of migration-related News

The content of news media coverage on immigration is obtained by extracting relevant URLs that survey participants accessed—specifically, URLs from news media websites. German mainstream news outlets were identified using a list of domains provided by Scharnow and Bachl (2017), while alternative news media outlets were pinpointed based on websites compiled by Müller and Bach (Müller und Bach 2023). Following initial pre-processing (see Appendix B for further details), the classification dataset

encompassed 98,695 unique articles. Among these, 95,915 originated from mainstream news websites, and 2,780 from alternative news outlets.

Two classification tasks were then carried out: one for detecting articles related to migration and another for identifying opinion pieces. This not only provided a direct measure of migration news coverage but also enabled exploration of the potentially more pronounced impacts of opinionated news (Frischlich et al. 2021). For both tasks, the classifier—utilizing a pre-trained BERT model (Devlin et al. 2018) for the German language, bert-base-german-cased—was trained on a fine-tuning dataset comprising labeled news articles. These articles were obtained by scraping content from mainstream German newspapers that were prominently featured in sections related to immigration and opinion columns.

Following several validation steps (outlined in the Appendix B), the fine-tuned classifier was applied to the corpus of scraped articles. The data were then filtered to align with the individuals and the period of data collection reflected in the subsequent survey models. This involved restricting the corpus to articles consumed before the end of Wave 3 (i.e., between July 15 and the week following the federal elections in Germany on September 26) and by respondents included in the survey models (i.e. no missing values).

Out of a total of 44,826 articles under consideration, 1,653 were classified as migration-related (including 163 from alternative news outlets), of which 312 were also classified as opinion articles (with 58 from alternative news outlets) (see Appendix C for a list of outlets).

3.2.2 Individual-level Measures

Two attitudes related to immigration are assessed to evaluate potential impacts of news consumption. Initially, attitudes toward immigrants are measured using a five-point item that inquiries about the extent to which foreigners should assimilate into German culture, ranging from 1 = "Foreigners should completely assimilate into German culture" to 5 = "Foreigners should have the opportunity to live according to their own culture". The variable was subsequently recoded such that a higher value stands for a higher rejection of immigrants. Due to data limitations, this represents the sole item directly measuring attitudes toward immigrants, which is undeniably a limitation of this study.

Secondly, attitudes towards the AfD Party are measured through an eleven-point like/dislike scale. All items undergo recoding, ensuring that higher values indicate a more anti-immigration stance, and they are z-standardized across the entire sample. The variations in the dependent variables across waves are illustrated in Appendix D.

Independent Variables

News consumption is assessed by evaluating both exposure (dummy) and the extent of consumption (relative count). For each outlet type (mainstream and alternative) and news category (migration-

related and opinion pieces), a dummy variable is created to indicate whether the individual recorded at least one visit to a relevant news article in the period preceding each survey wave. This evaluation is complemented by a relative count of visits. This involves calculating the number of visits to each outlet and article type and then dividing this raw count by the number of active days, denoting days when the individual logged in at least once on their browser (not necessarily related to news). Moreover, by capturing news consumption in terms of both exposure and extent, it acknowledges that these are distinct processes—recording any visit versus recording multiple visits. This consideration aligns with existing literature on the correlates of alternative news consumption (Müller und Bach 2023).

Control variables

To disentangle the anticipated media effects posited by the theories from preexisting beliefs, interests, and other potential factors that could impact the dependent variables, adjustments are made for left-right self-placement, political interest, party identification, populist attitudes, and socio-demographic factors (age, sex, and education). All controls, except for the last two, vary over time.

3.3 Methods

Insights into the distinct reporting approaches of migration-related topics by alternative and mainstream news outlets are pursued through two distinct methodologies. Initially, the BERTopic topic model (Grootendorst 2022), an unsupervised technique, comes into play, as it categorizes individual documents, specifically news articles, into broader topics based on text similarity, determined by contextual word embeddings. Additionally, named entity recognition (Schweter und Akbik 2020) is applied to identify relevant entities like individuals, organizations, and locations frequently mentioned in news articles related to immigration. Both techniques concentrate the analysis on comparing outlet types, investigating whether specific news topics or entities are more prevalent in alternative news outlets than in mainstream outlets.

To measure the potential effects of migration-related news consumption on individual attitudes, a series of random effects within-between models (Bell und Jones 2015) is employed, yielding estimates for over-time effects (within individuals) and baseline differences between individuals. Within effects utilize only the variation occurring between waves, thereby reflecting the short-term effects of increased (or decreased) news consumption on environmental attitudes. Conversely, between effects capture whether average differences in environmental attitudes correlate with average levels of news consumption, regardless of over-time variation. Within effects are thus better suited for studying the effects of news consumption, employing individuals as their own control group, while between effects may better indicate self-selection, suggesting that different individuals initially consume different news.

4 Results

4.1 Descriptive Results News Consumption

Basic descriptive results on news consumption across mainstream and alternative news outlets are presented in Table 1. The number of unique URLs visited by respondents and the sum of visits are documented, differentiating between classified URLs (i.e. fully scraped news articles used in the classification model), URLs classified as migration-related, and, among those, opinion and descriptive pieces. The data filtering steps are summarized, with counts specifically referring to URLs consumed between waves one and three, and by individuals who are part of the subsequent survey models. The number of individuals (users) who accessed each type of URL is also provided.

As indicated in Table 1, the migration-related articles accounted for 3.3 % of classified news articles in mainstream news outlets and 10.5 % in alternative news media. It is crucial to emphasize that these percentages do not represent the production of news websites during the specified period but solely reflect the content consumed by respondents. Regarding the proportion of users who consume migration-related articles, there is no difference between the news outlets. While 32 % of people who have read at least one classified mainstream article have also read a migration-related article, this share is 30% for alternative news.

But differences can be seen between opinion and descriptive articles, where opinion articles attract a higher number of visitors per article than descriptive news in both types of media. This phenomenon may be attributed to the narrative style of these articles and/or their clearer ideological content, as suggested by Boukes et al. (2014). Appendix E illustrates the temporal and content-specific aspects of news consumption. Concerning migration-related news, the levels of volume and duration exhibit similarity between mainstream and alternative news outlets.

Table 1 Descriptive results on news consumption by outlet and article type

	Mainstream News			Alternative News		
	Unique count	Visits	Users	Unique count	Visits	Users
All URLs	175,879	832,886	1,783	2,115	9,430	154
Scraped URLs	50,631	257,186	1,532	1,563	4,230	121
Classified URLs	44,826	167,388	1,414	1,541	4,165	121
Migration-related	1,490	5,700	450	163	402	37
Opinion articles	250	1,257	224	62	213	26
Descriptive articles	1,240	4,443	393	101	189	22

Note: Data restricted to period between waves one and three, and to respondents who provided tracking data in that period. Classified URLs are news articles that went through the pre-processing steps detailed in the Appendix B.

4.2 Text Analysis

Transitioning to an analysis of the content within migration-related news articles, a comparison of mainstream and alternative news coverage is conducted through a topic analysis using BERTopic (Grootendorst, 2022). This method involves the unsupervised clustering of text documents into broader categories based on text similarity, with topics characterized by key words defining the documents grouped together by the algorithm.

It is important to emphasize that the model is not instructed to identify specific topics, nor is the number of topics pre-specified in the corpus of migration-related news. In Appendix F, details are provided on the steps taken to preprocess the data and reduce the number of outliers and topics for a more cohesive overview. This resulted in the final model yielding 21 topics. For ease of interpretation, these 21 topics were further manually condensed into supercategories by aggregating topics with key words considered semantically similar. The list of topics constituting each manual category is also presented in Appendix F (see Table 9).

An overview of the topics is provided in Table 2, which, depending on the news outlet, presents the number of articles on a topic as well as the total number of visits to articles on these topics (both in absolute terms and as percentage).

Overall, the topics differ across outlets. In mainstream news, articles and visits are dominated by topics such as "Withdrawal Afghanistan" and "Politics," which together account for over 60% of articles and nearly 70% of news. Given the focus on the withdrawal from Afghanistan in August 2021 and the upcoming federal election in September 21, this is not surprising. Although both topics are comparatively frequently covered in alternative media (together over 53% of articles), the topic of "Withdrawal Afghanistan" notably differs in terms of visits. Despite a similar number of articles (32% vs. 26%), alternative media articles received far fewer visits in average (44% vs. 20%).

Readers of alternative media seem to focus more on the category "Migration EU/Belarus," which varies significantly between outlets. This topic revolves around articles about immigrants on their way to or through Europe, with many focusing on the current situation at the Belarusian borders. In alternative media, there were more than twice as many articles (11% vs. 26%) and three times as many views (11% vs. 33%). In line with theory, alternative media and their readers seem to focus more on perceived threats posed by immigrants (Schulz 2019).

Special attention is also required for the topic of "Crime", which consists of four subcategories. Two of them involve specific crimes committed by migrants (29 cases), one predominantly focuses on attacks on or incidents in asylum seeker accommodations, and the largest category deals with crimes committed by migrants, including some (albeit far fewer) articles about violence against migrants (158 cases). Although the number of articles in both outlets does not differ significantly, a manual examination of the articles reveals, that violence against migrants by Germans is not addressed in

alternative media, consistent with the theory. Another noticeable difference is the higher number of visits to these articles in alternative media (13% vs. 19%) despite the same proportion of articles. In summary, alternative media exhibit a focus on a perceived threat posed by migrants, whether through incidents at European borders during that time or articles about crimes committed by migrants.

Table 2 Distribution of unique articles and visits by manual categories created from topic modeling

Manual category	Mainstream News		Alternative News	
	N articles (%)	N visits (%)	N articles (%)	N visits (%)
Withdrawal Afghanistan	479 (32.15%)	2530 (44.39%)	42 (25.77%)	80 (19.90%)
Politics	423 (28.39%)	1438 (25.23%)	45 (27.61%)	94 (23.38%)
Crime	204 (13.69%)	765 (13.42%)	21 (12.88%)	75 (18.66%)
Migration EU/Border Belarus	163 (10.94%)	480 (8.42%)	43 (26.38%)	133 (33.08%)
Migration International	62 (4.16%)	143 (2.51%)	3 (1.84%)	4 (1.00%)
Right-wing Pressure	52 (3.49%)	97 (1.70%)	5 (3.07%)	6 (1.49%)
Other	40 (2.68%)	88 (1.54%)	1 (0.61%)	3 (0.75%)
Mediterranean Sea Rescue	30 (2.01%)	76 (1.33%)	2 (1.23%)	3 (0.75%)
Domestic Policy Issues	27 (1.81%)	50 (0.88%)	0 (0.00%)	0 (0.00%)
EU Agreement Turkey	10 (0.67%)	33 (0.58%)	1 (0.61%)	4 (1.00%)
Total	1490 (100.00%)	5700 (100.00%)	163 (100.00%)	402 (100.00%)

Note: Categories created by manually aggregating results of BERTopic model (see Table 11 in Appendix F). Percentages are relative to outlet type. Categories sorted by number of articles in mainstream news outlets.

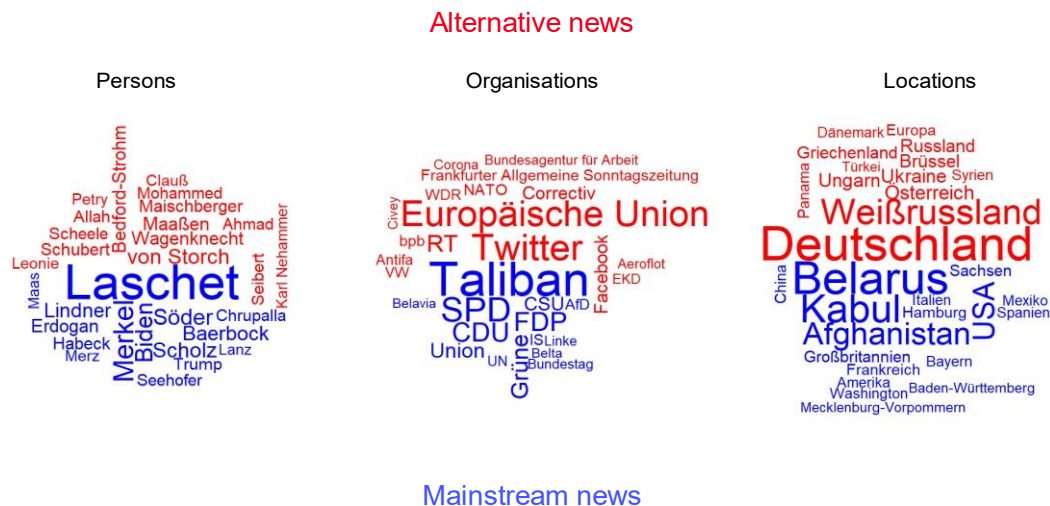
However, one should be cautious when interpreting findings from the topic modeling. Firstly, the classification of documents into topics is not manually validated, and the entire classification process is unsupervised. Secondly, the model may lack sensitivity to detect narratives and topics unique to alternative news articles due to the limited number of articles from these outlets. The sample of articles is biased toward mainstream websites, potentially resulting in a more varied reality for alternative news articles than portrayed in this analysis.

Delving deeper into the content of migration-related news, an analysis of the entities (including persons, organizations, places, and miscellaneous entities) commonly mentioned in these articles is conducted using a named entity recognition model (Schweter and Akbik, 2020). The relative frequency of mentions of each entity is compared between mainstream and alternative news outlets. This involves focusing on entities that are mentioned in both types of outlets, in line with the approach taken in topic modeling to uncover differences in commonalities.

To achieve this, word clouds are generated for the 30 entities with the highest relative proportion (see Figure 1). Here, large words in red signify a significantly higher prevalence in articles from

alternative outlets. Additional visual representations for other categories (locations, miscellaneous entities, as well as a comparison of opinion versus descriptive articles) are provided in Appendix G.

Figure 1 Comparison word clouds of named entities



Regarding mentioned individuals in the newsoutlets, the focus is on current politicians, attributed to the upcoming election at that time. While mainstream media comparatively more often mentions politicians from established parties such as Armin Laschet or Olaf Scholz (the two chancellor candidates), whereas politicians with more right-wing populist statements, such as Beatrix von Storch or Hans Georg Maaßen, are more often found in alternative media. Additionally, it is noticeable that alternative media more frequently uses central figures of the Muslim faith, such as Mohammed and Allah. This would need further investigation, but in some of the manually reviewed articles, they were only mentioned in a negative context.

A pattern observed in the topics is confirmed in the examination of mentioned organizations. While mainstream media more often addresses current topics such as the withdrawal from Afghanistan (related to the term Taliban) and the upcoming election by mentioning political parties, alternative media primarily focus on the European Union. This particularly relates to the situation at the European borders at that time. Also, platforms like Twitter, a significant platform for alternative media (Müller and Schulz 2021), or the broadcaster Russia Today (RT) are prominently mentioned in alternative media.

In mainstream media, a similar pattern as already seen is evident when looking at locations as entities. Locations associated with current issues, such as Kabul, Afghanistan, or Belarus, are mentioned much more frequently. In this comparison, an interesting observation emerges, which is that alternative media uses the not officially used "Weißrussland" for Belarus more frequently than

the official name "Belarus" itself. Furthermore, alternative media focuses on Germany, and upon closer examination, on countries currently heavily covered in migration reporting, such as Greece or Hungary, and countries from which currently many asylum seekers arrive, such as Syria.

Overall, this comparison once again highlights the focus of alternative media on perceived threats from immigrants, while mainstream media concentrates more on currently relevant topics such as the withdrawal from Afghanistan and the federal election.

4.3 Survey Models

For the examination of the impact of migration-related news consumption on corresponding attitudes and political views, consideration is restricted to the web-tracking data of respondents who read classified articles. This limitation arises from the fact that information about exposure to migration-related news is exclusively available for these respondents. The results of random effects within-between models are depicted in Figure 2, with a separate model for each dependent variable (see Table 10 for regression table). Given the complexity of the model, the interpretation begins with the within effects (represented by the dotted line), followed by the interpretation of the between effects (represented by the solid line). The within effects solely rely on over-time variations in news consumption and attitude changes, enabling an assessment of whether individual changes in news consumption, as observed in the tracking data, correlate with individual changes in migration attitudes from wave to wave, independent of individual baseline levels.

Beginning with the dummy effects, which indicate whether individuals have read at least one article from the respective outlet. Excluded are individuals who are always or never exposed across waves in this estimate since they do not vary in the independent variable.

Regarding the within effects, almost no significant influences are observed at this point, surprisingly, the only, albeit slight, significant effect stems from the main news dummy, with a higher standard deviation of 0.05. Individuals who vary in the general consumption of mainstream news between waves show a stronger disapproval of migrants. However, this pertains to a specific group of individuals who did not consume mainstream news during at least one wave in the period.

Shifting focus to the extent of exposure, measured by the relative count of visits, the impact of increased (or decreased) news consumption among individuals who have recorded at least one visit to that specific type of outlet will now be compared. Put simply, the within-effect count assesses higher versus lower levels of consumption rather than comparing any exposure to no exposure. However, no effects are observed in this case, neither concerning the rejection of migrants nor the sympathy towards the AfD.

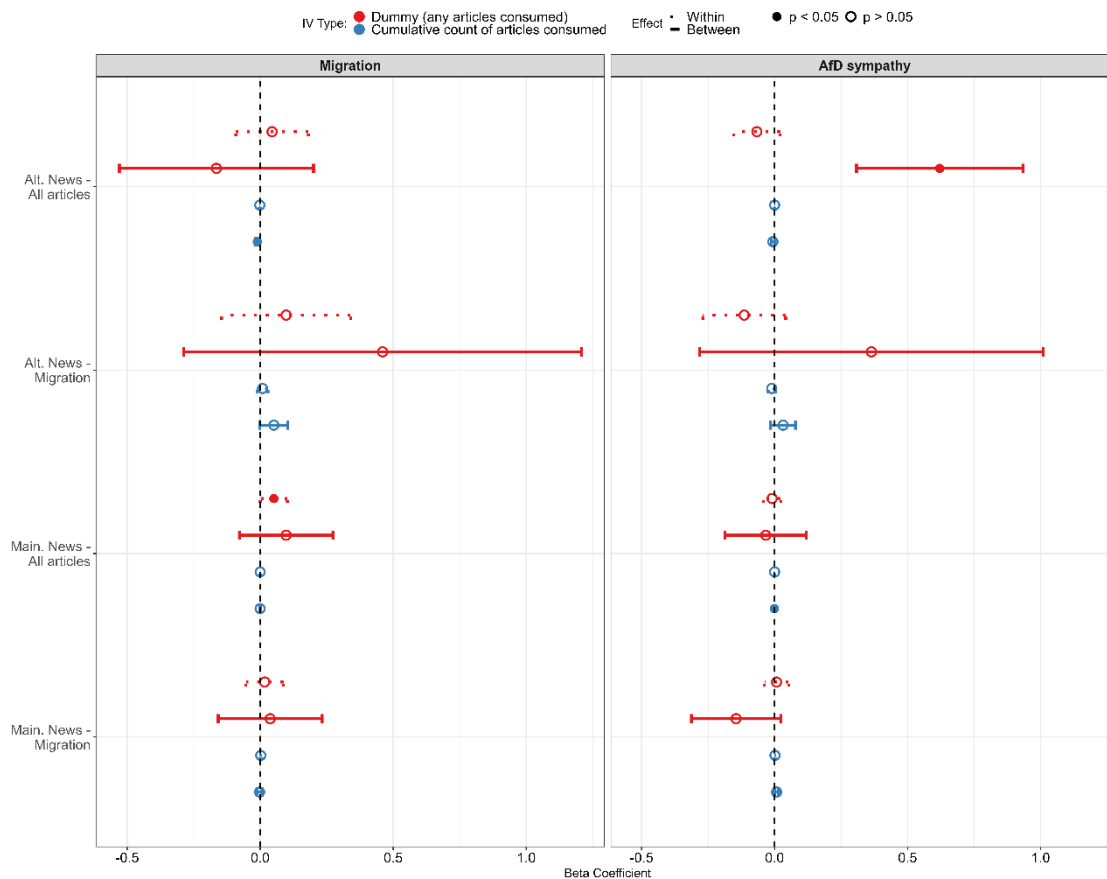
Nevertheless, some between effects were identified (represented by solid lines). These effects capture average differences in attitudes between individuals, correlating with their overall levels of news consumption independent of over-time variation. Regarding dummy variables, a positive effect

on sympathy towards the AfD can be observed for general alternative news. Thus, individuals who consume alternative media, regardless of the quantity, exhibit higher sympathy towards the AfD ($\beta = -0.57$, $p < 0.001$). Another unexpected effect emerges when considering between effects concerning the number of articles read. If individuals consume more articles from alternative media, their disapproval of migrants decreases ($\beta = -0.01$, $p < 0.05$). However, this cannot be explained by any theory and may be attributed to the weak dependent variable, which will be reviewed further in the Discussion chapter.

Examining the counts of articles read from mainstream news, a corresponding and theory-conforming negative effect on sympathy towards the AfD is evident, with a decrease of 0.0005 per additional article read ($p < 0.05$).

Another regression concerning the differentiation between opinion and descriptive migration-related news, also comparing both news outlets, shows only a single significant effect. This pertains to the within effect of the count of descriptive alternative media, which decreases sympathy towards the AfD by -0.03 per read article. Consequently, individuals who read more descriptive articles compared to opinion articles on the topic in alternative news decrease their sympathy towards the AfD in line with the theory (see Appendix H; Figure 10 and Table 11).

Figure 2 Results of Random Effects Within-Between Models



Based on these results of the analysis, only one of the earlier formulated hypotheses can be confirmed. Here the hypotheses are recalled.

H1: The higher the consumption of migration-related articles, the greater the rejection of immigrants.

This hypothesis could not be confirmed, as no significant results were found for the count of migration-related articles.

H2: The higher the consumption of migration-related articles, the greater the sympathy toward the AfD.

Similarly, for hypothesis two, no significant findings were identified that could confirm it.

H3: Consumption of alternative media increases rejection toward immigrants.

Hypothesis three cannot be confirmed. Moreover, a weak effect in the opposite direction is observed, indicating that the consumption of more alternative articles leads to a lower rejection of migrants.

H4: Consumption of alternative media increases sympathy toward the AfD.

Hypothesis four can be confirmed, at least with between effects. Accordingly, general consumption of alternative media results in higher sympathy toward the AfD, and a numerically higher consumption of mainstream articles leads to lower sympathy toward the AfD.

5 Discussion

The aim of this study at hand is to investigate the influence of the consumption of migration-related articles on attitudes towards immigrants, as well as its impact on sympathy towards the AfD, the German populist party. Additionally, a differentiation between alternative and mainstream news is made to examine whether the effects vary depending on the news outlet.

The difference in the content coverage of both news outlets regarding migration articles is evident in topics, as well as in the detailed examination of mentioned individuals, organizations, and locations. Mainstream media and its readers focus much more on current topics of the time, such as the withdrawal from Afghanistan or politics regarding the upcoming federal election. In comparison, alternative media reports more on migration to the EU and fuels the perceived threat of migrants associated with it. Measured in views per article on a topic, readers of alternative media show a much stronger focus on the topic of migration to the EU, as well as on the topic of crime, which in alternative media consists only of articles about crimes committed by migrants.

A similar pattern emerges when examining the frequently mentioned entities depending on the news outlet. Here, alternative media again focuses on current topics by more frequently mentioning current politicians outside the AfD, more frequent mentions of the parties themselves, and entities

related to the withdrawal from Afghanistan, such as "Kabul" or "Taliban." Alternative media focuses more on politicians associated with the right-wing populist camp, platforms for alternative media, and on locations regarding which strong migration debates were taking place at that time, such as Greece or origin countries of asylum seekers like Syria.

Regarding the influence of migration-related articles from both media on attitudes towards immigrants, the formulated hypothesis (H1) could not be confirmed. No significant effect of the consumption of migration articles was observed, neither through a dummy variable nor in terms of the number of articles. The same applies to the influence of migration articles on sympathy towards the AfD.

Regarding the different effects of consuming alternative versus mainstream media on attitudes towards migrants, the formulated hypothesis (H3) could not be confirmed either. Effects even appear in the opposite direction. On the one hand, there is a within effect of individuals who varied between waves in consuming mainstream news in general. These individuals show a slight effect, indicating an increased rejection of foreigners. However, it should be noted that this is a specific group of people who did not consume any mainstream news at all in at least one of the periods.

Furthermore, a negative between effect of the number of consumed articles from alternative media is observed, indicating that with increasing article consumption, attitudes towards migrants improve. This effect cannot be explained by any theory and may be related to the weak dependent variable, which will be discussed later on.

However, effects are observed depending on the consumption of the news outlet on sympathy towards the AfD. Although no significant within effects could be identified, there are some between effects. In this context, the general consumption of alternative media compared to no consumption of these media is associated with higher sympathy towards the AfD, confirming hypothesis (H4). This means that not the number of read alternative media articles is the relevant quantity but only the exposure to this media. These findings align with existing literature (Atkinson and Leon Berg 2012; Theorin and Strömbäck 2020). According to these studies, this is attributed, among other reasons, to the rhetoric of these media, which is akin to right-wing populist rhetoric, and the focus on specific topics that are predominantly taken up by right-wing populist parties. Furthermore, an effect is observed in the number of read mainstream articles, indicating that higher consumption is associated with lower sympathy towards the AfD.

Unfortunately, the study at hand has some shortcomings that have to be discussed. Firstly, the construction of the dependent variable attitude towards migrants is a central limitation. While other studies usually combine multiple items into a scale or sometimes differentiate by migrant groups, this study, due to survey restrictions, could only use a single item. This item asks whether and to what extent migrants should adapt to German culture. Compared to commonly used items, this can be

classified as a rather weak indicator for such a complex construct. Nevertheless, it provides at least an initial impression of the relationships.

Secondly, although a panel study was used, which is essential in this context, the study period was only about three months. It is unlikely that attitudes towards migrants, which are shaped over a lifetime, significantly change over such a short period across the sample, which is why no within effects could be found, except for one. There is no guarantee that effects could definitely be found if one considers a longer period. To draw causal conclusions, a panel study is indispensable but should consider a longer timeframe in future designs.

Moreover, the sample of alternative news, especially those related to migration, is very small, which limits the expectation of significant effects and thus restricts the statistical power. However, this cannot be easily addressed, except by extending the data collection period or increasing the sample size of individuals to obtain a larger number of articles and consumers.

Apart from these central shortcomings, there are some more associated with the study's design, although their impact can be considered minor. These include the possibility for participants to pause web-tracking of data, which is not transparent, and the general neglect of offline news consumption (Bach et al. 2022). Another limitation of course is the sole focus on Germany.

Despite these shortcomings, the study at hand significantly contributes to the understudied comparison of alternative and mainstream media in Germany regarding attitudes towards immigrants and sympathy towards right-wing populist parties by depicting the different structures in the content of news outlets. Moreover, hypotheses regarding sympathy towards the AfD could be confirmed. Thus, this study confirmed the Framing Theory regarding the influence of media outlets on sympathy towards the AfD, although the impact described in the Agenda Setting Theory could not be confirmed.

In addition to the necessary design of a panel study coupled with tracking data - which is almost absent in most studies on this topic - instead of only querying media consumption, this analysis stands out by creating classifiers that classify news articles as migration-related or opinion/descriptive articles, based on approximately 50,000 scraped articles. Other studies solely relied on keywords for this purpose (e.g., Štětka et al. 2021).

As the topic of migration continues to gain prominence and contributes, among other factors, to the strengthening of right-wing populist parties across Europe, understanding the influence of media consumption on these issues is necessary, and this study contributes to that. Future studies can build on the introduced methodology and address the shortcomings to gain a clearer understanding of this complex topic.

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Appendix A

Data Information

Combined survey and web-tracking data were utilized in this study, sourced from participants in a commercial opt-in online access panel based in Germany, managed by Respondi/Bilendi. The study's participants were drawn from a cohort of individuals who had consented to the continuous monitoring of their web browsing activities by the survey vendor on their computers and mobile devices, including smartphones and tablets, spanning the period from July to December 2021.

To elaborate, registered participants in the panel were requested to install a browser plug-in on their personal computers and download a research app onto their mobile devices. The browser plug-in on personal computers recorded details such as the website visited, its URL, as well as the date, time, and duration of the visit. Meanwhile, on smartphones and tablets, the research app performed a similar function, capturing information for visits made through the device's native browser (e.g., Chrome on Android devices and Safari on Apple devices). However, activities within apps, including the content viewed by app users, remained beyond the scope of the research app. Participants who agreed to the web browsing data collection received monthly incentives in addition to survey incentives, with the flexibility to opt out or temporarily pause the behavioral data collection at any point.

From a cohort of 4,034 tracked participants designated for our study, several quota samples were drawn for participation in a four-wave survey study titled "Political Identities and News Consumption in Election Times" (PINCET). All participants in this study had to be adults residing in Germany and eligible to vote in the 2021 federal election. Quota sampling was employed to construct a sample for each individual survey mirroring the demographic composition of the German population eligible to vote, considering age, gender, and state of residence (without crossing quotas). Overall, PINCET encompassed four distinct survey samples, each containing a substantial proportion of participants with repeated involvement. The surveys were conducted shortly before and after the 2021 German federal election, with a focus on the initial three waves employing identical questionnaires, constituting a true panel study.

For the first survey (August 30 to September 7), 3,530 participants were invited, and approximately 63% (2,228) of those invited completed the survey. The second survey, conducted from September 14 to September 20, 2021, involved 3,761 invited participants, achieving a participation rate of about 65% (2,459 completed interviews). The third survey, conducted immediately after the election (September 26; fieldwork from September 27 to October 4, 2021), included 3,565 participants with a participation rate of about 64% (2,269 participants). Participants who had engaged in prior waves were consistently invited for subsequent waves, and the participation patterns across waves are

detailed in Table 3.

The analytical sample for our study comprised respondents who took part in at least two of the three waves, as longitudinal data analysis necessitates a minimum of two observations per individual.

Adhering to these criteria, our final analysis sample consisted of 1,825 participants in wave one, 2,001 in wave two, and 1,875 in wave three. Summary statistics of browsing activity are presented in Table 4. An overview of the descriptive statistics is offered by Table 5.

Table 3 Summary of survey participation rates

Wave	Data	Invited	Completed	S&T data	Analysis	S participation	S&T participation
One	08/30 -	3530	2228	2147	1252	63	61
Two	09/14 –	3761	2459	2383	1363	65	63
Three	09/27 –	3565	2269	2198	1276	64	62

*Note: S: Survey; T: Tracking * Participated in at least two waves of the survey and read at least one classified news article. ** Completed surveys divided by number of invited participants. *** Completed surveys where tracking data is available divided by the number of invited participants.*

Table 4 Descriptive Statistics on Active Days (Overall and Per Wave)

Wave	Median	Mean	SD	Min	Max
All	49	44.57	22.89	2	77
1	35	30.66	16.17	1	53
2	10	10.51	8.56	1	64
3	10	9.15	4.07	1	29

Table 5 Descriptive statistics on the socio-demographic characteristics of the analysis sample across the different waves

Var	Wave1	Wave2	Wave3
Gender			
Male	694 (55.40%)	780 (57.20%)	713 (55.90%)
Female	558 (44.60%)	583 (42.80%)	563 (44.10%)
Total	1252 (100.00%)	1363 (100.00%)	1276 (100.00%)
Age			
18-24	79 (6.30%)	84 (6.20%)	74 (5.80%)

Var	Wave1	Wave2	Wave3
25-34	174 (13.90%)	192 (14.10%)	189 (14.80%)
35-54	564 (45.00%)	634 (46.50%)	589 (46.20%)
55+	435 (34.70%)	453 (33.20%)	424 (33.20%)
Total	1252 (99.90%)	1363 (100.00%)	1276 (100.00%)
Education			
Low	169 (13.50%)	180 (13.20%)	172 (13.50%)
Medium	524 (41.90%)	561 (41.20%)	519 (40.70%)
High	559 (44.60%)	622 (45.60%)	585 (45.80%)
Total	1252 (100.00%)	1363 (100.00%)	1276 (100.00%)
Vocaitional training			
In Training	78 (6.20%)	88 (6.50%)	77 (6.00%)
Apprenticeship	831 (66.40%)	898 (65.90%)	840 (65.80%)
College	269 (21.50%)	298 (21.90%)	285 (22.30%)
None	74 (5.90%)	79 (5.80%)	74 (5.80%)
Total	1252 (100.00%)	1363 (100.10%)	1276 (99.90%)
Party identification			
CDU/CSU	168 (13.40%)	169 (12.40%)	153 (12.00%)
SPD	138 (11.00%)	163 (12.00%)	166 (13.00%)
Greens	121 (9.70%)	150 (11.00%)	135 (10.60%)
FDP	51 (4.10%)	75 (5.50%)	73 (5.70%)
Die Linke	101 (8.10%)	105 (7.70%)	101 (7.90%)
AfD	73 (5.80%)	85 (6.20%)	79 (6.20%)
Other	28 (2.20%)	36 (2.60%)	33 (2.60%)
None	572 (45.70%)	580 (42.60%)	536 (42.00%)
Total	1252 (100.00%)	1363 (100.00%)	1276 (100.00%)

Appendix B

The extraction of data from mainstream news articles was limited to outlets that received a minimum of 1,000 visits from survey respondents. The scraping of URLs accessed on personal computers occurred in January 2022, while the scraping of mobile-visited content took place later in 2022. The resulting dataset exhibited numerous duplicates, articles behind paywalls, or those with incomplete and/or minimal information (such as video pages), along with instances of noise (e.g., inaccurately scraped CSS selectors or random letters). To address these noisy articles, the final dataset was refined to include only unique articles containing at least 50 words. The ultimate corpus employed for the subsequent classification steps encompassed 98,695 unique articles, comprising 95,915 from mainstream news websites and 2,780 from alternative news outlets.

Building upon this foundation, two distinct classification tasks were undertaken: detecting articles related to migration, and identifying opinion pieces. In both instances, the fine-tuning process involved a pre-trained BERT model for the German language, specifically `bert-base-german-cased`. BERT, a state-of-the-art transformer model, employs contextual word embeddings—numeric representations of words that consider context. It excels in classification tasks, outperforming more traditional language models commonly used in the social sciences (Devlin et al. 2018).

The initial step in this process necessitated the creation of a fine-tuning dataset by scraping news articles from various German outlets that were unequivocally situated in sections or sub-sections related to migration topics and opinion columns. Conversely, for both classification tasks, an opposing set was generated by scraping articles from unrelated general-purpose news categories, ensuring a balanced sample. This resulted in a fine-tuning dataset comprising 45,874 news articles for migration topics (half from migration categories) and 54,174 for opinion pieces (half from opinion sections)¹. Subsequently, two five-fold cross-validation procedures were executed with an 80/20 split for two primary purposes. Firstly, this facilitated a closer examination of inaccurately classified news articles, allowing for manual reclassification if necessary. Despite the extraction of articles from topic-specific pages or subcategories, occasional misclassifications occurred on the websites. Given the impracticality of manually coding over 100,000 articles, this method was adopted. The 5-fold division ensured that each article appeared once in the test dataset, got classified by the classifier, and subsequently reviewed. The second k-fold cross-validation served to mitigate the possibility of the final classifiers performing well only on the randomly selected test dataset during fine-tuning and not on other data.

Both classifiers exhibited favorable average scores across all metrics in the second cross-validation, indicating minimal variation in evaluation metrics across folds, affirming the consistent performance

¹ Sources: Augsburgs Allgemeine, BILD, DW, n-tv, RND, Spiegel, Süddeutsche Zeitung, Tagesspiegel, taz, t-online and WELT

of both models across diverse data sets. The final classifiers were then trained using a 90/10 split of the fine-tuning data, employing a learning rate of $4e-5$, a batch size of 16, and allowing up to 15 epochs for fine-tuning. During fine-tuning, five evaluations per epoch were conducted to assess the model's performance continuously. The early stopping condition was applied to halt fine-tuning when the evaluation loss could not be minimized for 15 consecutive times. The optimal model for the migration classification task emerged precisely at the end of the third epoch, whereas for the opinion classification task, the best model was identified in the second epoch after a total of 4,263 steps.

Table 6 Second five-fold cross-validation metrics

	Opinion	Migration
Evaluation loss	0,16	0,08915
MCC	0,87	0,948616
AUROC	0,98	0,995131
AUPRC	0,98	0,994581
Precision	0,93	0,96
Recall	0,94	0,98
F1	0,98	0,98
Accuracy	0,94	0,97
Specificity	0,93	0,97

Appendix C

Web-Tracking

Table 7 List of mainstream outlets by domain

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
bild.de	6,826	34,210	973	64,659
t-online.de	6,324	34,351	549	380,577
welt.de	2,981	9,714	155	18,327
spiegel.de	2,445	8,729	520	13,903
news-und-nachrichten.de	1,933	6,158	1	5,934
n-tv.de	1,770	13,923	8	15,526
express.de	1,631	3,357	12	4,967
focus.de	1,587	6,020	5	8,897
tag24.de	1,509	2,885	0	2,041
zeit.de	1,313	4,572	46	9,756
rtl.de	907	1,599	5	6,875
faz.net	901	2,668	12	2,043
stern.de	764	1,712	320	2,995
tagesspiegel.de	756	2,167	7	2,332
bz-berlin.de	695	1,313	12	1,420
tz.de	694	3,824	1	2,161
merkur.de	692	1,328	5	449
derwesten.de	610	1,124	2	423
infranken.de	599	1,478	15	655
sueddeutsche.de	568	1,352	117	2,728
mopo.de	557	861	4	1,431
berliner-kurier.de	531	1,068	0	851
hna.de	526	1,240	5	1,215
fr.de	517	1,166	1	767
watson.de	420	1,036	0	934
tagesschau.de	417	1,745	19	25,617
morgenpost.de	415	945	5	2,077
rp-online.de	389	1,234	40	1,908
ndr.de	349	1,649	9	7,986

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
mdr.de	341	1,125	84	3,720
lvz.de	314	752	90	2,282
ksta.de	300	625	4	1,023
op-online.de	284	423	0	716
taz.de	261	806	1	179
businessinsider.de	256	569	3	274
osthessen-news.de	241	1,772	27	2,523
pnp.de	205	296	30	1,062
news.de	203	390	23	145
nordbayern.de	202	358	21	386
abendblatt.de	182	293	13	178
augsburger-allgemeine.de	171	380	112	1,301
wiwo.de	164	421	6	701
waz.de	163	353	374	1,838
swp.de	158	355	112	394
rheinpfalz.de	147	972	2	376
all-in.de	145	389	0	379
deutschlandfunk.de	133	480	10	258
kreiszeitung.de	131	225	0	481
schwarzwaelder-bote.de	121	225	7	705
ostsee-zeitung.de	118	172	8	397
nordkurier.de	95	152	3	325
mainpost.de	94	161	0	461
frankenpost.de	93	184	22	269
swr3.de	85	360	7	2,766
wn.de	82	168	5	220
badische-zeitung.de	67	104	65	426
wa.de	61	151	0	32
otz.de	58	102	529	2,261
haller-kreisblatt.de	56	65	190	873
rbb24.de	53	126	0	301
stimme.de	50	74	6	282
rga.de	41	46	3	163

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
suedkurier.de	35	119	33	110
pz-news.de	34	71	5	110
thueringer-allgemeine.de	15	43	53	629
shz.de	12	18	74	3,126
hessenschau.de	11	274	28	4,051
butenunbinnen.de	8	178	4	1,017
swr.de	7	44	0	2,452
mv-online.de	3	6	22	1,240
freiepresse.de	0	15	0	494
volksstimme.de	0	118	0	437
br.de	NA	NA	0	7,589
saechsische.de	NA	NA	798	2,282
hr3.de	NA	NA	0	2,214
bbv-net.de	NA	NA	0	1,704
schwaebische.de	NA	NA	55	1,331
haz.de	NA	NA	58	895
stuttgarter-zeitung.de	NA	NA	3	893
stuttgarter-nachrichten.de	NA	NA	0	804
noz.de	NA	NA	67	662
ovb-online.de	NA	NA	0	653
rnz.de	NA	NA	0	648
deutschlandfunkkultur.de	NA	NA	0	580
nwzonline.de	NA	NA	0	521
oz-online.de	NA	NA	0	518
rbb-online.de	NA	NA	0	491
vorsprung-online.de	NA	NA	0	444
sr.de	NA	NA	0	426
goslarsche.de	NA	NA	0	423
allgemeine-zeitung.de	NA	NA	0	419
berliner-zeitung.de	NA	NA	0	373
radiobremen.de	NA	NA	0	354
westfalen-blatt.de	NA	NA	0	330
ln-online.de	NA	NA	0	325

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
donaukurier.de	NA	NA	0	307
correctiv.org	NA	NA	0	299
dewezet.de	NA	NA	0	285
neuepresse.de	NA	NA	0	281
phoenix.de	NA	NA	0	254
weser-kurier.de	NA	NA	0	254
nw.de	NA	NA	0	252
wlz-online.de	NA	NA	0	252
nrz.de	NA	NA	0	247
rhein-zeitung.de	NA	NA	0	233
fnp.de	NA	NA	0	226
op-marburg.de	NA	NA	0	224
radioeins.de	NA	NA	0	224
onetz.de	NA	NA	0	219
moz.de	NA	NA	0	218
lr-online.de	NA	NA	0	215
hr4.de	NA	NA	0	214
hr1.de	NA	NA	0	212
lokalkompass.de	NA	NA	0	212
manager-magazin.de	NA	NA	0	203
n-joy.de	NA	NA	0	184
dnn.de	NA	NA	0	182
wz.de	NA	NA	0	174
wp.de	NA	NA	0	171
hr-fernsehen.de	NA	NA	0	161
fnweb.de	NA	NA	0	155
extratipp.com	NA	NA	0	154
aachener-zeitung.de	NA	NA	0	153
idowa.de	NA	NA	0	142
insuedthueringen.de	NA	NA	0	134
maz-online.de	NA	NA	0	133
wochenspiegelonline.de	NA	NA	0	125
giessener-allgemeine.de	NA	NA	0	124

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
mittelbayerische.de	NA	NA	0	122
mz-web.de	NA	NA	0	114
esslinger-zeitung.de	NA	NA	0	113
lz.de	NA	NA	0	109
ivz-aktuell.de	NA	NA	0	106
svz.de	NA	NA	0	104
np-coburg.de	NA	NA	0	103
jetzt.de	NA	NA	0	100
buzzfeed.com	NA	NA	0	99
echo24.de	NA	NA	0	96
wochenblatt.de	NA	NA	0	80
ntz.de	NA	NA	0	79
thueringen24.de	NA	NA	0	78
freitag.de	NA	NA	0	77
braunschweiger-zeitung.de	NA	NA	0	76
echo-online.de	NA	NA	0	74
rundschau-online.de	NA	NA	0	68
ka-news.de	NA	NA	0	66
netzpolitik.org	NA	NA	0	66
giessener-anzeiger.de	NA	NA	0	64
marbuch-verlag.de	NA	NA	0	62
regionalheute.de	NA	NA	0	57
morgenweb.de	NA	NA	0	56
marler-zeitung.de	NA	NA	0	52
deutschlandradio.de	NA	NA	0	51
wetterauer-zeitung.de	NA	NA	0	49
tlz.de	NA	NA	0	45
ze.tt	NA	NA	0	39
hildesheimer-allgemeine.de	NA	NA	0	37
gea.de	NA	NA	0	36
news38.de	NA	NA	0	36
deutschlandfunknova.de	NA	NA	0	35
gnz.de	NA	NA	0	32

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
goettinger-tageblatt.de	NA	NA	0	32
cicero.de	NA	NA	0	30
kreis-anzeiger.de	NA	NA	0	25
rtlradio.de	NA	NA	0	25
wiesbadener-kurier.de	NA	NA	0	24
bo.de	NA	NA	0	22
hr2.de	NA	NA	0	21
die-glocke.de	NA	NA	0	20
tagblatt.de	NA	NA	0	20
zvw.de	NA	NA	0	20
solinger-tageblatt.de	NA	NA	0	19
wormser-zeitung.de	NA	NA	0	19
mt.de	NA	NA	0	18
hertener-allgemeine.de	NA	NA	0	15
recklinghaeuser-zeitung.de	NA	NA	0	15
hr-inforadio.de	NA	NA	0	14
az-muenchen.de	NA	NA	0	13
az-online.de	NA	NA	0	13
ejz.de	NA	NA	0	13
muensterschezeitung.de	NA	NA	0	13
waz-online.de	NA	NA	0	13
schwaebische-post.de	NA	NA	0	12
waltroper-zeitung.de	NA	NA	0	12
heute.de	NA	NA	0	11
ndz.de	NA	NA	0	11
szlz.de	NA	NA	0	9
wr.de	NA	NA	0	9
azonline.de	NA	NA	0	8
borkenerzeitung.de	NA	NA	0	8
gmuender-tagespost.de	NA	NA	0	8
inforadio.de	NA	NA	0	8
usinger-anzeiger.de	NA	NA	0	8
meinanzeiger.de	NA	NA	0	7

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
ga-online.de	NA	NA	0	6
rhoenundsaalepost.de	NA	NA	0	6
sn-online.de	NA	NA	0	6
main-spitze.de	NA	NA	0	5
on-online.de	NA	NA	0	5
you-fm.de	NA	NA	0	5
derpatriot.de	NA	NA	0	4
gaeubote.de	NA	NA	0	4
paz-online.de	NA	NA	0	4
szbz.de	NA	NA	0	4
wochenblatt.net	NA	NA	0	4
hersfelder-zeitung.de	NA	NA	0	3
siegenger-zeitung.de	NA	NA	0	3
sz-online.de	NA	NA	0	3
teckbote.de	NA	NA	0	3
torgauerzeitung.com	NA	NA	0	3
werra-rundschau.de	NA	NA	0	3
huffingtonpost.de	NA	NA	0	2
n24.de	NA	NA	0	2
oldenburgische-	NA	NA	0	2
stimberg-zeitung.de	NA	NA	0	2
dattelter-morgenpost.de	NA	NA	0	1
lampertheimer-zeitung.de	NA	NA	0	1
n-land.de	NA	NA	0	1
oberhessische-zeitung.de	NA	NA	0	1
Total	44,826	167,388	5,805	665,498

Table 8 List of alternative outlets by domain

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
rt.com	460	951	4	575
epochtimes.de	304	579	2	39
reitschuster.de	205	716	1	790
tichyseinblick.de	109	317	0	262
jungefreiheit.de	103	295	5	359
freiewelt.net	71	136	0	121
journalistenwatch.com	62	231	2	165
wochenblick.at	58	184	0	107
kenfm.de	33	333	0	87
neopresse.com	20	22	0	33
nachdenkseiten.de	19	87	0	39
catholicnewsagency.com	14	27	NA	NA
kopp-report.de	8	12	0	275
sciencefiles.org	8	27	0	2
brightside.me	7	10	0	1
deutsche-wirtschafts-	7	29	0	5
rubikon.news	7	32	0	10
mmnews.de	5	14	NA	NA
politikstube.com	5	16	NA	NA
pravda-tv.com	5	6	NA	NA
philosophia-perennis.com	4	6	0	11
tmz.com	4	8	0	72
zuerst.de	4	6	0	1
boreddaddy.com	3	7	NA	NA
middleeastmonitor.com	3	11	NA	NA
anonymousnews.ru	2	11	0	6
compact-online.de	2	68	0	14
politikversagen.net	2	14	6	1,619
sickchirpse.com	2	2	2	2
unzensuriert.de	2	2	NA	NA
ef-magazin.de	1	3	NA	NA
legitim.ch	1	1	0	1

Domain	N articles classified	N visits to classified articles	N articles unclassified	N visits to unclassified articles
sott.net	1	2	NA	NA
achgut.com	NA	NA	0	236
boingboing.net	NA	NA	0	5
contra-magazin.com	NA	NA	0	2
doctissimo.fr	NA	NA	0	1
globaltimes.cn	NA	NA	0	4
medizin-heute.net	NA	NA	0	1
peta.org	NA	NA	0	6
pi-news.net	NA	NA	0	398
sputniknews.com	NA	NA	0	15
themix.net	NA	NA	0	1
Total	1,541	4,165	22	5,265

In Table 7 and 8 are some instances where the count of classified articles is zero, despite recorded figures for visits. These entries correspond to pages from which headlines could not be successfully scraped, thereby impeding the identification of unique articles. This challenge arises due to the inherent difficulty in determining unique articles per URL, given that different URLs may correspond to the same article. In the context of unclassified articles, notable disparities occasionally exist between the counts of articles and the recorded figures for visits. This discrepancy stems from the fact that certain websites proved challenging to (fully) scrape or predominantly functioned as landing pages.

Appendix D

Table 9 Survey Questions

Variable:	The “people” as virtuous and homogeneous	
	<i>German wording:</i>	<i>English wording:</i>
Question wording:	Es gibt zu verschiedenen politischen Themen unterschiedliche Meinungen. Wie ist das bei Ihnen: Wie sehr stimmen Sie den folgenden Aussagen zu? Die politischen Unterschiede zwischen Eliten und dem Volk sind größer als die Unterschiede innerhalb des Volkes.	There are varying opinions on different political topics. What about you: How strongly do you disagree or agree with the following statements? - The political differences between the elites and the people are larger than the differences between the people.
Values/ Answer wording:	Stimme überhaupt nicht zu	Strongly disagree
	Stimme eher nicht zu	Somewhat disagree
	Teils/ Teils	Undecided
	Stimme eher zu	Somewhat agree
	Stimme voll und ganz zu	Strongly agree
Variable:	Belief in popular sovereignty	
	<i>German wording:</i>	<i>English wording:</i>
Question wording:	Es gibt zu verschiedenen politischen Themen unterschiedliche Meinungen. Wie ist das bei Ihnen: Wie sehr stimmen Sie den folgenden Aussagen zu? Das Volk, und nicht die Politiker, sollte die wichtigsten politischen Entscheidungen treffen.	There are varying opinions on different political topics. What about you: How strongly do you disagree or agree with the following statements? - The people, not the politicians, should make the most important political decisions.
Values/ Answer wording:	Stimme überhaupt nicht zu	Strongly disagree
	Stimme eher nicht zu	Somewhat disagree
	Teils/ Teils	Undecided
	Stimme eher zu	Somewhat agree
	Stimme voll und ganz zu	Strongly agree
Variable:	Anti-elitism	

	<i>German wording:</i>	<i>English wording:</i>
Question wording:	Es gibt zu verschiedenen politischen Themen unterschiedliche Meinungen. Wie ist das bei Ihnen: Wie sehr stimmen Sie den folgenden Aussagen zu? - Die Parteien wollen nur die Stimmen der Wähler, ihre Ansichten interessieren sie nicht.	There are varying opinions on different political topics. What about you: How strongly do you disagree or agree with the following statements? - The political parties only want people to vote for them, they are not interested in their views.
Values/ Answer wording:	Stimme überhaupt nicht zu	Strongly disagree
	Stimme eher nicht zu	Somewhat disagree
	Teils/ Teils	Undecided
	Stimme eher zu	Somewhat agree
	Stimme voll und ganz zu	Strongly agree

Variable: **Attitudes towards climate change**

	<i>German wording:</i>	<i>English wording:</i>
Question wording:	Manche sagen, der Kampf gegen den Klimawandel sollte auf jeden Fall Vorrang haben, auch wenn dies das Wirtschaftswachstum beeinträchtigt. Andere sagen, Wirtschaftswachstum sollte auf jeden Fall Vorrang haben, auch wenn dies den Kampf gegen den Klimawandel beeinträchtigt. - Wie sehen Sie das?	Some say that the fight against climate change should definitely take precedence, even if it impairs economic growth. Others say that economic growth should definitely take precedence, even if it impairs the fight against climate change. What is your personal view on this issue?
Values/ Answer wording:	1 Der Kampf gegen den Klimawandel sollte auf jeden Fall Vorrang haben, auch wenn dies das Wirtschaftswachstum beeinträchtigt	1 Fight against climate change should take precedence, even if it impairs economic growth
	2	2
	3	3
	4	4

5 Das Wirtschaftswachstum sollte auf jeden Fall Vorrang haben, auch wenn dies den Kampf gegen den Klimawandel beeinträchtigt	5 Economic growth should take precedence, even if it impairs the fight against climate change
---	--

Variable: **Importance of environmental protection**

<i>German wording:</i> Question wording: Values/ Answer wording:	<i>German wording:</i> Wie wichtig ist Umweltschutz für Sie persönlich? überhaupt nicht wichtig nicht sehr wichtig ziemlich wichtig sehr wichtig	<i>English wording:</i> How important is environmental protection for you? not important at all not very important rather important very important
--	---	---

Variables: **Sympathy for Green/AfD Party**

<i>German wording:</i> Question wording: Values/ Answer wording:	<i>German wording:</i> Was halten Sie - ganz allgemein gesprochen - von den einzelnen politischen Parteien? Was halten Sie von der. . . Bündnis 90/ Die Grünen / AfD? 0 Halte sehr wenig von dieser Partei 1 2 3 4 5 6 7 8	<i>English wording:</i> Generally speaking, what do you think of the particular political parties? What do you think of the. . . Bündnis 90/ Die Grünen / AfD? 0 I think very poorly of this party 1 2 3 4 5 6 7 8
--	---	---

10 Halte sehr viel von dieser ParteiVariable: **Feeling connected to a party***German wording:*

Question
wording:

Viele Leute fühlen sich über längere Zeit mit einer bestimmten politischen Partei verbunden, obwohl sie auch ab und zu eine andere Partei wählen. Wie ist das bei Ihnen: Fühlen Sie sich - ganz allgemein gesprochen - mit einer bestimmten Partei verbunden?

Values/
Answer
wording:

Ja

Nein

10 I think very highly of this party*English wording:*

Many people feel connected to a particular political party over a long period of time although they may also occasionally vote for another party. What about you: Do you - in general - feel connected to a particular political party?

Yes

No

Variable: **Connected to which party?***German wording:*

Question
wording:

Welcher Partei fühlen Sie sich verbunden?

Values/
Answer
wording:

CDU

CSU

SPD

FDP

AfD

Bündnis 90/ Die Grünen

Die Linke

Piratenpartei

Andere Partei, und zwar [Textfeld]

English wording:

Which political party do you feel connected to?

The Christian Democratic Union "CDU"

Christian Social Union "CSU"

The Social Democratic Party "SPD"

The Free Democratic Party "FDP"

Alternative for Germany "AfD"

Alliance 90/ The Greens "Bündnis 90/ Die Grünen"

The Left "Die Linke"

Pirates' party "Piratenpartei"

Other, please specify [Open answer textfield]

Variable: **Gender**

	<i>German wording:</i>	<i>English wording:</i>
Question wording:	Zum Abschluss der Befragung brauchen wir noch einige soziodemografische Angaben für statistische Zwecke. Was ist ihr Geschlecht?	To conclude the survey we need some additional sociodemographic information for statistical reasons. What is your gender?
Values/ Answer wording:	Männlich Weiblich Divers	Male Female Diverse

Variable: **Birth year**

	<i>German wording:</i>	<i>English wording:</i>
Question wording:	In welchem Jahr sind Sie geboren?	In which year were you born?
Values/ Answer wording:	numerisch [1920-2021]	numeric [1920-2021]

Variable: **Education**

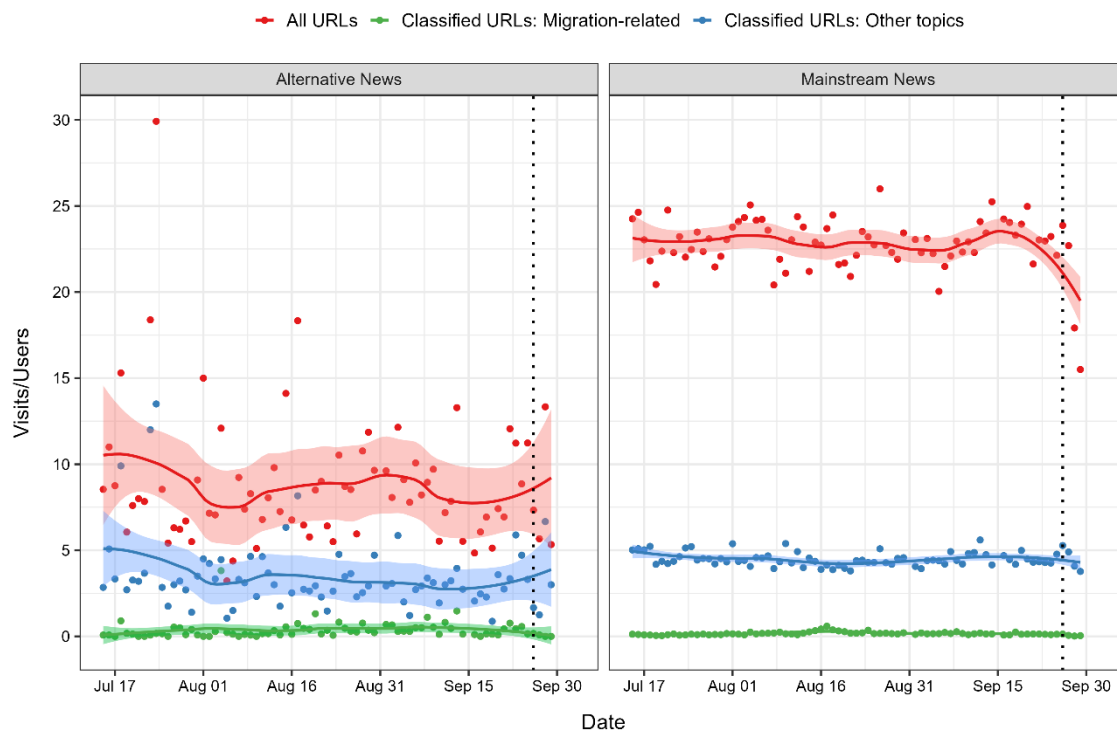
	<i>German wording:</i>	<i>English wording:</i>
Question wording:	Nun folgen Fragen zu formalen Bildungsabschlüssen und Erwerbstätigkeit. Was ist der höchste allgemeinbildende Schulabschluss, den Sie erreicht haben?	In the following, there are questions about your formal vocational degrees and your employment. What is the highest education certificate that you have obtained?
Values/ Answer wording:	(Noch) kein Schulabschluss Abschluss einer Förderschule (Sonderschule, Hilfsschule) Volks- oder Hauptschulabschluss bzw. Polytechnische Oberschule der ehem. DDR mit Abschluss der 8. oder 9. Klasse Mittlere Reife, Realschulabschluss, Fachoberschulreife oder mittlerer Schulabschluss bzw. Polytechnische Oberschule der ehem. DDR mit Abschluss der 10. Klasse	No school degree (yet) Degree of a special need school (Auxiliary school) Primary school leaving certificate or polytechnic secondary school with 8th or 9th grade diploma of the former GDR Secondary school leaving certificate, 'Realschulabschluss', admission to a university of applied sciences (degree from a technical college) or polytechnic secondary school with degree 10th grade of the former GDR

	Allgemeine oder fachgebundene Hochschulreife, Abitur	High School diploma or Extended Secondary School with 12th grade (higher education entrance qualification)
	Anderer Schulabschluss, und zwar [Textfeld]	Other school-leaving qualifications, please specify [Open answer text box]
Variable:	Political interest	
	<i>German wording:</i>	<i>English wording:</i>
Question	Als erstes interessiert uns Ihr politisches Interesse.	First, we are interested in your political interest.
wording:	Einmal ganz allgemein gesprochen: Wie sehr interessieren Sie sich für Politik? Sind Sie...	Generally speaking: How interested are you in politics? Are you...
Values/	Überhaupt nicht interessiert	Not interested at all
Answer		
wording:	Wenig interessiert	A little interested
	Teilweise interessiert	Partly interested
	Ziemlich interessiert	Rather interested
	Sehr interessiert	Very interested
Variables:	Self-placement left-right	
	<i>German wording:</i>	<i>English wording:</i>
Question	In der Politik spricht man manchmal von "links" und "rechts". Wo auf der Skala würden Sie sich selbst einstufen, wenn 0 für links steht und 10 für rechts?	In politics, the terms "left" and "right" are sometimes used. Where would you place yourself on this scale, if 0 is left and 10 is right?
wording:		
Values/	0 Links	0 Left
Answer		
wording:	1	1
	2	2
	3	3
	4	4
	5	5

<hr/>	6	6
	7	7
	8	8
	9	9
	10 Rechts	10 Right
<hr/>		

Appendix E

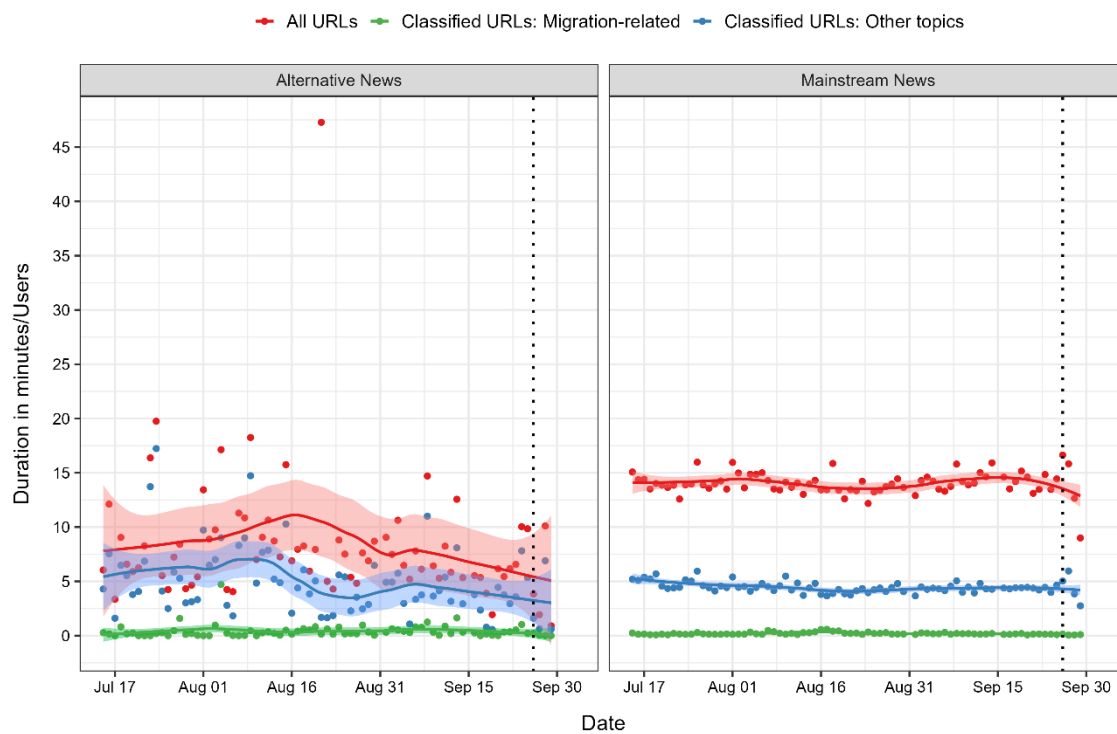
Figure 3 News consumption over time (Visits/Users)



Note:

Loess line with span set at 0.5. Y-axis shows relative count of visits by dividing total number of visits (per day) by the number of active users in each outlet. Dotted line indicates the day of the German federal election (26 September).

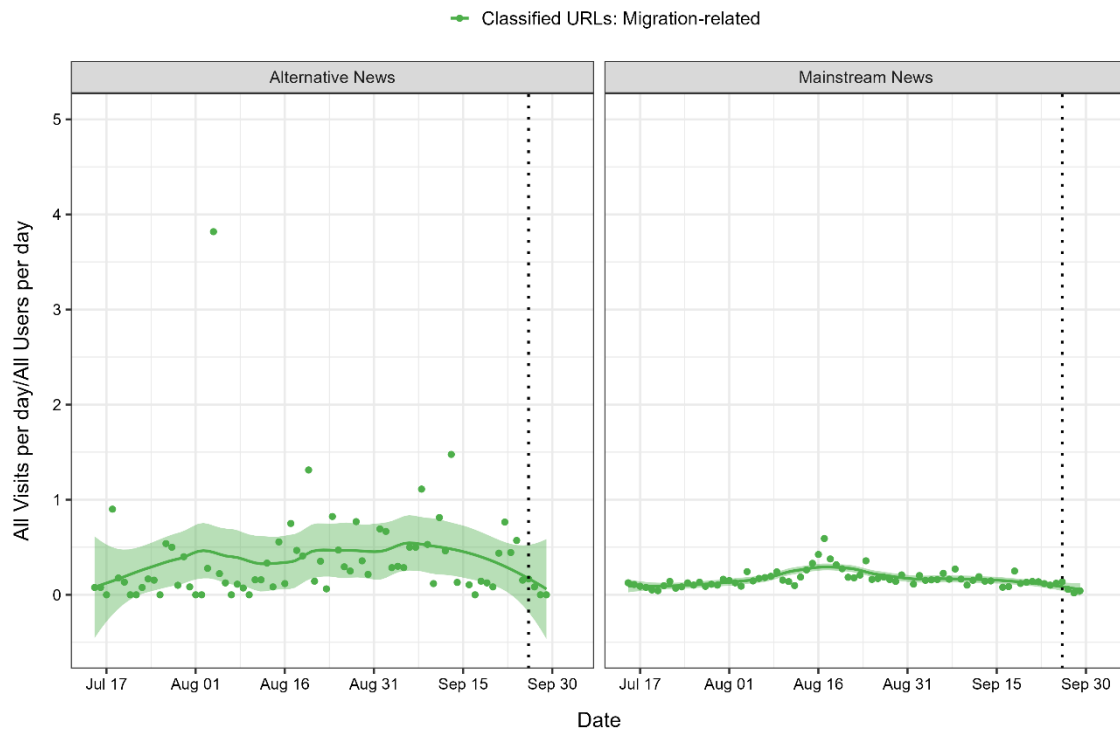
Figure 4 News consumption over time (Duration/Users)



Note:

Loess line with span set at 0.5. Y-axis shows relative duration of visits by dividing total number of duration in minutes (per day) by the number of active users in each outlet. Dotted line indicates the day of the German federal election (26 September).

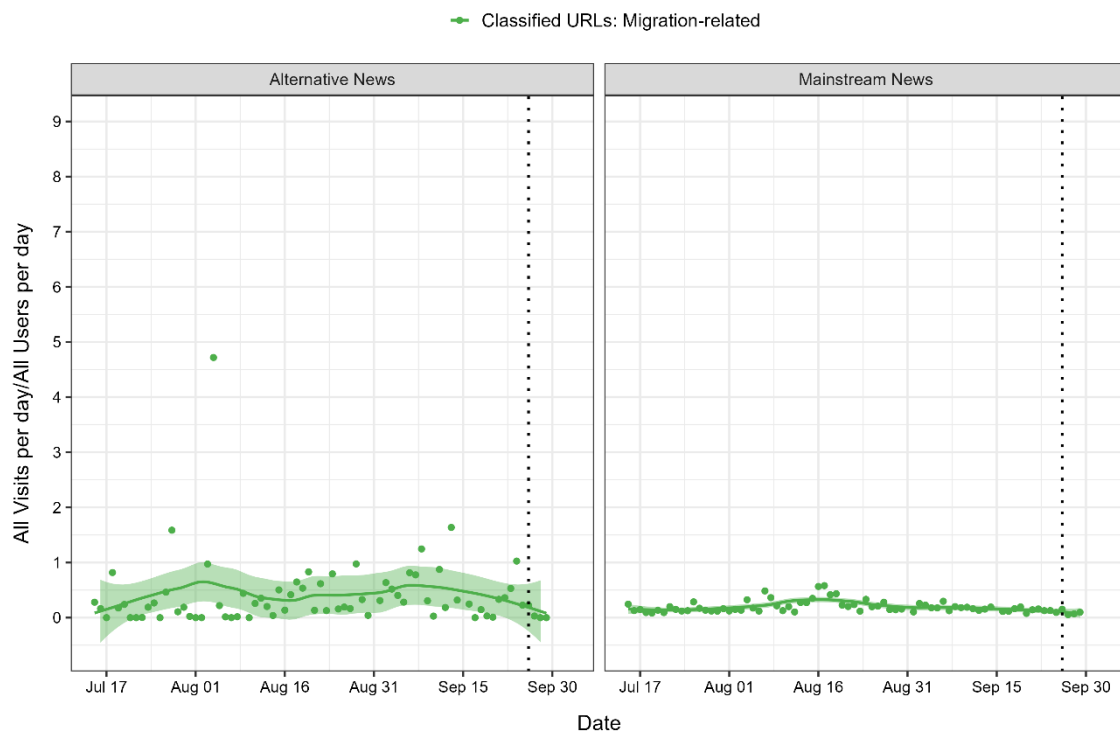
Figure 5 News consumption over time (Visits/Users) - only migration-related news



Note:

Loess line with span set at 0.5. Y-axis shows relative count of visits by dividing total number of visits (per day) by the number of active users in each outlet. Dotted line indicates the day of the German federal election (26 September).

Figure 6 News consumption over time (Duration/Users) - only migration-related news



Note:

Loess line with span set at 0.5. Y-axis shows relative duration of visits by dividing total number of duration in minutes (per day) by the number of active users in each outlet. Dotted line indicates the day of the German federal election (26 September).

Appendix F

The BERTopic model (Grootendorst, 2022) was applied to the complete corpus of articles categorized as migration-related (i.e., before filtering to align with respondents and dates included in the survey models). This was done both to ensure the direct comparability of prevalent categories between the two and to address the insufficient number of migration articles from alternative websites for reliable topic modeling. Stop words were removed after generating and clustering the embeddings produced by the model.

Using the author's recommended methods for topic and outlier reduction through HDBSCAN clustering and c-TF-IDF representations 21 topics were identified, without any outliers, forming the basis for the manual categories presented in the main text (Table 2). The topic and manual category assigned to each unique article were then exported, and the results presented are derived from the filtered dataset, restricted to articles consumed during the period between waves one and three. The distribution of articles and visits to each topic identified by the BERTopic model and the respective, manually constructed supercategory is detailed in Table A8.

Table 10 Overview topics and supercategories

Topic number and keywords	Mainstream News		Alternative News	
	N articles	N visits	N articles	N visits
Withdrawal Afghanistan				
0_taliban_afghanistan_kabul_menschen	479	2,530	42	80
Total	479	2,530	42	80
Migration EU/Border Belarus				
1_eu_belarus_grenze_migranten	163	480	43	133
Total	163	480	43	133
EU Agreement Turkey				
9_türkei_erdogan_türkische_türkischen	10	33	1	4
Total	10	33	1	4
Migration International				
6_rio_haiti_migranten_del	26	69	1	1
11_großbritannien_johnson_britische_brexit	9	15	2	3
16_syrien_amnesty_daraa_bericht	16	37	NA	NA
19_usa_einreisen_einreise_us	11	22	NA	NA
Total	62	143	3	4
Mediterranean Sea Rescue				
7_sea_migranten_mittelmeer_menschen	30	76	2	3

Topic number and keywords	Mainstream News		Alternative News	
	N articles	N visits	N articles	N visits
Withdrawal Afghanistan				
Total	30	76	2	3
Politics				
2_grünen_spd_mehr_cdu	393	1,300	42	87
5_merkel_kanzlerin_angela_merkels	28	130	3	7
20_fdp_union_jamaika_grünen	2	8	NA	NA
Total	423	1,438	45	94
Domestic Policy Issues				
17_familie_kinder_kita_abschiebung	12	24	NA	NA
18_dorf_abchasien_schule_kinder	15	26	NA	NA
Total	27	50	0	0
Crime				
3_wurde_polizei_mann_menschen	158	546	12	42
8_feuerwehr_polizei_flammen_feuer	17	64	NA	NA
15_maryam_brüder_berlin_leiche	16	77	2	5
21_frauen_polizei_männer_vergewaltigung	13	78	7	28
Total	204	765	21	75
Right-wing Pressure				
4_stadt_sagt_greifswald_wohnungen	40	70	2	3
10_polizei_demonstranten_neonazis_pegida	12	27	3	3
Total	52	97	5	6
Other				
12_döner_italien_sagt_solomon	14	42	1	3
13_lagus_soziales_inzidenz_gesundheit	14	21	NA	NA
14_sprache_deutschen_wörter_deutsche	12	25	NA	NA
Total	40	88	1	3
Total Overall	1,490	5,700	163	402

Figure 9 Comparison word cloud of Named Entities. Opinion versus Descriptive - Miscellaneous Category



Appendix H

Survey Models

Table 11 Results of random effects within-between models. Figure 2

	Migration	AfD sympathy
Intercept	-0.13863 (0.15259)	1.00070*** (0.13040)
Alt. News Dummy	0.04486 (0.06960)	-0.06668 (0.04469)
Alt. News Dummy (Between)	-0.16458 (0.18609)	0.62076*** (0.15943)
Alt. News Count (Within)	-0.00155 (0.00112)	0.00010 (0.00072)
Alt. News Count (Between)	-0.01072** (0.00376)	-0.00636+ (0.00335)
Alt. News Mig. Dummy	0.09736 (0.12364)	-0.11408 (0.07937)
Alt. News Mig. Dummy (Between)	0.46006 (0.38100)	0.36409 (0.32953)
Alt. News Mig. Count (Within)	0.00886 (0.01037)	-0.01077 (0.00666)
Alt. News Mig. Count (Between)	0.05147+ (0.02676)	0.03189 (0.02383)
Main News Dummy	0.05120* (0.02594)	-0.00934 (0.01666)
Main News Dummy (Between)	0.09768 (0.08963)	-0.03319 (0.07800)
Main News Count (Within)	0.00000 (0.00012)	0.00007 (0.00007)
Main News Count (Between)	-0.00023 (0.00025)	-0.00054* (0.00023)
Main News Mig. Dummy	0.01692 (0.03606)	0.00743 (0.02315)
Main News Mig. Dummy (Between)	0.03758 (0.09959)	-0.14482+ (0.08555)

	Migration	AfD sympathy
Main News Mig. Count (Within)	0.00209 (0.00223)	0.00155 (0.00143)
Main News Mig. Count (Between)	-0.00219 (0.00474)	0.00750+ (0.00421)
Populist Att. (Within)	-0.01352 (0.02236)	0.01086 (0.01435)
Populist Att. (Between)	0.22849*** (0.02413)	0.24020*** (0.02120)
Pol. Interest (Within)	-0.01820 (0.02790)	-0.00784 (0.01791)
Pol. Interest (Between)	-0.06115* (0.02538)	0.06117** (0.02225)
Left-Right (Within)	0.08949** (0.03020)	0.00565 (0.01939)
Left-Right (Between)	0.26352*** (0.02520)	0.40880*** (0.02155)
In-Party: Die Linke	-0.24094** (0.08464)	-0.98112*** (0.06230)
In-Party: Greens	-0.28682** (0.09844)	-0.76662*** (0.07107)
In-Party: SPD	-0.18048+ (0.10004)	-0.92033*** (0.07350)
In-Party: FDP	-0.29645** (0.09041)	-0.85173*** (0.06555)
In-Party:CDU/CSU	-0.20304** (0.07276)	-0.81317*** (0.05239)
In-Party: AfD	-0.29431* (0.11704)	-0.99973*** (0.08419)
In-Party: Other	-0.27089** (0.08689)	-0.85675*** (0.06305)
Female	-0.04827 (0.04527)	-0.06955+ (0.04019)
Age: 18-24	0.00500 (0.12464)	-0.14659 (0.11066)

	Migration	AfD sympathy
Age: 25-34	0.21618+ (0.12205)	-0.18056+ (0.10835)
Age: 35-54	0.27986* (0.12557)	-0.22237* (0.11135)
Sec. Education: Medium	0.09290 (0.06664)	0.09270+ (0.05308)
Sec. Education: High	0.16231*** (0.04857)	0.09048* (0.03816)
Voc. Training: In Training	0.08991 (0.06108)	0.04230 (0.05302)
Voc. Training: Apprenticeship	-0.07982 (0.12102)	-0.16108 (0.10709)
Voc. Training: College	0.00175 (0.09276)	0.06808 (0.08218)
Wave: 2	0.01026 (0.02205)	0.01609 (0.01419)
Wave: 3	-0.00237 (0.02265)	0.02012 (0.01460)
Num.Obs.	3891	3891
R2 Marg.	0.218	0.424
R2 Cond.	0.744	0.891
AIC	8688.1	6179.1
BIC	8957.5	6448.5
ICC	0.7	0.8
RMSE	0.42	0.26

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

Note: Reference categories for categorical variables in tables below: male (Female), None (InParty), 55+ (Age), Low (Secondary Education), None (Vocational Training), 1 (Wave)

Figure 10 Results of Random Effects Within-Between Models. Consumption of Opinion and Descriptive Migration News

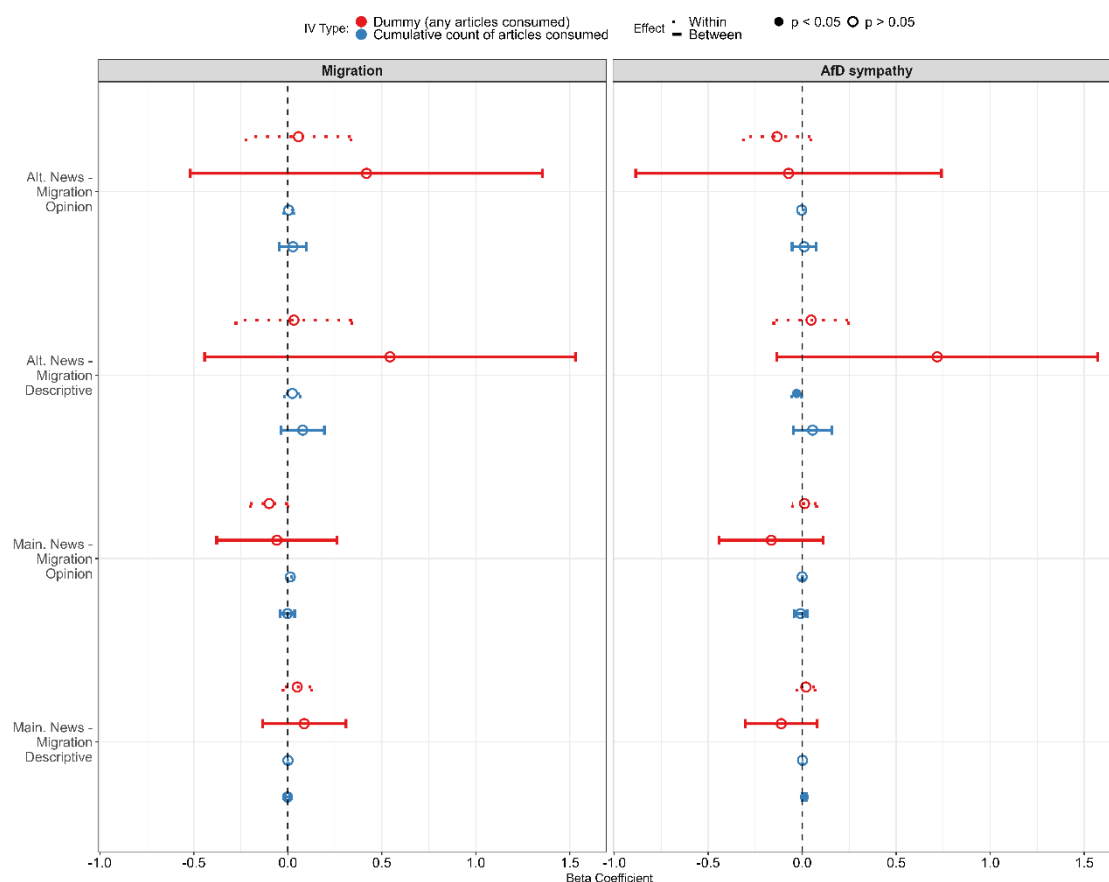


Table 12 Results of random effects within-between models. Figure 3. Opinion and descriptive news.

	Migration	AfD sympathy
Intercept	-0.13497 (0.15303)	0.99657*** (0.13050)
Alt. News Dummy	0.04459 (0.06916)	-0.07477+ (0.04442)
Alt. News Dummy (Between)	-0.14829 (0.18409)	0.65463*** (0.15736)
Alt. News Count (Within)	-0.00191 (0.00116)	0.00061 (0.00075)
Alt. News Count (Between)	-0.01231** (0.00408)	-0.00772* (0.00362)
Alt. News Mig. Descriptive Dummy	0.03256 (0.15742)	0.04709 (0.10108)

	Migration	AfD sympathy
Alt. News Mig. Descriptive Dummy (Between)	0.54370 (0.50287)	0.71798+ (0.43542)
Alt. News Mig. Descriptive Count (Within)	0.02420 (0.02115)	-0.03005* (0.01359)
Alt. News Mig. Descriptive Count (Between)	0.07931 (0.05879)	0.05518 (0.05226)
Alt. News Mig. Opinion Dummy	0.05691 (0.14216)	-0.13409 (0.09131)
Alt. Mig. Opinion Dummy (Between)	0.41837 (0.47774)	-0.07248 (0.41459)
Alt. News Mig. Opinion Count (Within)	0.00459 (0.01333)	-0.00286 (0.00856)
Alt. News Mig. Opinion Count (Between)	0.02726 (0.03660)	0.01042 (0.03254)
Main News Dummy	0.05187* (0.02592)	-0.01005 (0.01665)
Main News Dummy (Between)	0.09540 (0.08914)	-0.03351 (0.07740)
Main News Count (Within)	0.00000 (0.00012)	0.00006 (0.00008)
Main News Count (Between)	-0.00023 (0.00026)	-0.00049* (0.00023)
Main News Mig. Descriptive Dummy	0.05016 (0.03843)	0.01967 (0.02469)
Main News Mig. Descriptive Dummy (Between)	0.08719 (0.11331)	-0.11137 (0.09757)
Main News Mig. Descriptive Count (Within)	0.00073 (0.00255)	0.00160 (0.00164)
Main News Mig. Descriptive Count (Between)	-0.00156 (0.00547)	0.01144* (0.00485)
Main News Mig. Opinion Dummy	-0.09916+ (0.05121)	0.01220 (0.03289)
Main News Mig. Opinion Dummy (Between)	-0.05816 (0.16334)	-0.16468 (0.14108)

	Migration	AfD sympathy
Main News Mig. Opinion Count (Within)	0.01326+ (0.00779)	-0.00069 (0.00501)
Main News Mig. Opinion Count (Between)	-0.00173 (0.01942)	-0.00818 (0.01719)
Populist Att. (Within)	-0.01239 (0.02236)	0.01083 (0.01436)
Populist Att. (Between)	0.22544*** (0.02426)	0.23397*** (0.02127)
Pol. Interest (Within)	-0.01874 (0.02790)	-0.00769 (0.01792)
Pol. Interest (Between)	-0.06164* (0.02543)	0.06194** (0.02224)
Left-Right (Within)	0.08948** (0.03021)	0.00577 (0.01940)
Left-Right (Between)	0.26246*** (0.02524)	0.40930*** (0.02155)
In-Party: Die Linke	-0.23177** (0.08501)	-0.98136*** (0.06252)
In-Party: Greens	-0.28073** (0.09893)	-0.76480*** (0.07138)
In-Party: SPD	-0.17449+ (0.10037)	-0.92095*** (0.07371)
In-Party: FDP	-0.29257** (0.09080)	-0.85112*** (0.06582)
In-Party:CDU/CSU	-0.19921** (0.07319)	-0.81397*** (0.05269)
In-Party: AfD	-0.27775* (0.11769)	-0.99316*** (0.08461)
In-Party: Other	-0.26636** (0.08726)	-0.85885*** (0.06330)
Female	-0.05404 (0.04536)	-0.07276+ (0.04018)
Age: 18-24	0.00601 (0.12475)	-0.14045 (0.11052)

	Migration	AfD sympathy
Age: 25-34	0.21307+ (0.12219)	-0.17515 (0.10824)
Age: 35-54	0.27923* (0.12565)	-0.21602+ (0.11118)
Sec. Education: Medium	0.08900 (0.06665)	0.08947+ (0.05303)
Sec. Education: High	0.15962** (0.04861)	0.08819* (0.03815)
Voc. Training: In Training	0.08917 (0.06116)	0.04479 (0.05298)
Voc. Training: Apprenticeship	-0.08228 (0.12112)	-0.15897 (0.10695)
Voc. Training: College	0.00141 (0.09283)	0.07150 (0.08207)
Wave: 2	0.00796 (0.02212)	0.01693 (0.01425)
Wave: 3	-0.00384 (0.02275)	0.02118 (0.01467)
Num.Obs.	3891	3891
R2 Marg.	0.220	0.428
R2 Cond.	0.745	0.891
AIC	8724.5	6216.2
BIC	9044.1	6535.8
ICC	0.7	0.8
RMSE	0.42	0.26
+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001		

Declaration in lieu of an oath

I hereby declare that the final thesis presented is my own work and that I have not called upon the help of a third party. In addition, I affirm that neither I nor anybody else has submitted this paper or parts of it to obtain credits elsewhere before. I have clearly marked and acknowledged all quotations or references that have been taken from the works of others. All secondary literature and other sources are marked and listed in the bibliography. The same applies to all charts, diagrams and illustrations as well as to all Internet resources. Moreover, I consent to my paper being electronically stored and sent anonymously in order to be checked for plagiarism. I am aware that if this declaration is not made, the thesis may not be graded.

Kaiserslautern, 18th December 2023

Place, Date



Dean Lajic