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Combined Forces: Thinking and/or Feeling? How News Consumption Affects Anti-Muslim Attitudes through Perceptions and Emotions about the Economy

Laura Jacobs, Mark Boukes and Rens Vliegenthart

Abstract
This study develops a model that contributes to our understanding of the complex relationship between economic motivations and anti-Muslim attitudes by analyzing the underexplored role of news consumption. Using a large-scale Dutch panel dataset \( n = 2694 \), we test a structural equation model theoretically grounded in group conflict theory, in which the relationship between news consumption and anti-Muslim attitudes is mediated by perceptions and emotions about the economy. Findings offer sound empirical support for the hypothesized model: news consumption increases pessimistic economic perceptions and negative emotions about the economy, which in turn strengthens anti-Muslim attitudes. The mechanism, however, largely depends on the type of news outlet and genre: watching television seems more decisive than reading newspapers; moreover, especially exposure to soft and popular news formats plays a dominant role.

Keywords
news consumption, anti-immigrant attitudes, economic motivations, structural equation modeling, panel survey

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Introduction
In contemporary Western democracies, various outgroups become the target of hostile attitudes. At present, Muslims are one of the most salient outgroups in multiple Western
societies (Semyonov et al., 2006). A substantial body of literature shows that perceived threat is a core determinant of negative attitudes toward outgroups (Dancygier and Donnelly, 2013; Lancee and Pardos-Prado, 2013; Meuleman et al., 2009). Realistic group conflict theory asserts that a major source of negative attitudes toward outgroups relates to intergroup competition and struggles for scarce resources (Blalock, 1967; Blumer, 1958; Quillian, 1995). Previous research confirms that economic factors play a crucial role in shaping these attitudes; subjective perceptions of the economy are especially decisive (Citrin et al., 1997; Malhotra et al., 2013).

While it is widely acknowledged that economic motivations offer an explanation for anti-outgroup attitudes, the origin of these motivations has attracted less scholarly attention. A significant source shaping economic motivations is news exposure (Boomgaarden et al., 2011; Hagen, 2008). News about the economy is mainly negative in nature (Hester and Gibson, 2003; Ju, 2008; Soroka, 2006), making news exposure a significant factor in affecting citizens’ negative perceptions and emotions about the economy (De Boef and Kellstedt, 2004; Hollander and Vliegenthart, 2011; Lischka, 2015).

This study integrates prior insights by proposing a theoretical model aimed at increasing our knowledge of the relationship between economic motivations and anti-outgroup attitudes by bringing in the underexplored role of news consumption. The assumption is that economic perceptions and emotions play a mediating role between news consumption and attitudes toward outgroups: news consumption may evoke anti-outgroup attitudes by fostering negative perceptions and emotions about the economy.

This study contributes to the debate on economic motivations’ role in explaining hostile attitudes toward Muslims, who are considered a major outgroup in the Netherlands, in several ways. In this way, we advance the understanding of why prejudice, which presents one of the main worldwide challenges, occurs. First, we make a theoretical contribution by arguing that with regard to attitudes toward Muslims the role of economic threats should not be overlooked; in this regard, we examine the role of news consumption as an understudied factor in explaining economic motivations of anti-outgroup attitudes. Second, the study sheds light on the process through which news consumption shapes economic perceptions and emotions, which in turn impacts citizens’ attitudes toward Muslims. Third, we not only assess general news exposure but also focus on different outlet types (hard vs soft news; quality vs popular newspapers) as these may have opposite effects (see Boukes and Boomgaarden, 2015; Jacobs et al., 2016). Fourth, we test the relative role of news consumption in shaping attitudes, perceptions, and emotions about the economy while controlling for individuals’ socioeconomic positions and neighborhood characteristics. Hence, we investigate the interplay between both cognitive and affective factors and take into account real-world indicators. We use data from a three-wave panel study (n = 2694), which allows for the application of detailed measurements of individual citizens’ media use, emotions, their socioeconomic position and their anti-Muslim attitudes, and which disentangles the temporal ordering of variables: this goes beyond a simple cross-sectional mediation analysis, even while not being fully conclusive about causality.

**Impact of News Consumption on Perceptions and Emotions about the Economy**

Journalists, in their traditional role as gatekeeper, rely on a set of news values (Galtung and Ruge, 1965; Harcup and O’Neill, 2001) while selecting topics to cover from the
unlimited range of issues that potentially could be covered (Donsbach, 2004). Probably, the most well-known news value is negativity: “good news is no news.”

Empirical research confirms this strong focus on negativity in news, particularly in the context of economic news. By comparing real-world economic developments to actual news coverage, Stuart Soroka (2006) showed that economic news is negatively skewed: journalists pick out negative developments regarding unemployment rates and inflation. This negativity bias in economic news has been confirmed in many geographical contexts and time periods (Goidel and Langley, 1995; Harrington, 1989; Hester and Gibson, 2003; Ju, 2008).

By consuming economic news, citizens will thus be exposed to a more negative picture than might be warranted by real-world circumstances. The dominance of negativity in economic news coverage impacts perceptions of the national economy and decreases consumer confidence: the tone of economic news is a significant predictor of consumers’ evaluation of economic conditions (Blood and Phillips, 1995; De Boef and Kellstedt, 2004; Hollanders and Vliegenthart, 2011) and expectations about the future economy (Boomgaarden et al., 2011; Lischka, 2015; Sanders et al., 1993). This effect is particularly strong for negative news about the economy, as positive economic news has been found to hardly influence public perceptions (Goidel and Langley, 1995; Hester and Gibson, 2003; Ju, 2008; Soroka, 2006). Arguably, the effect of economic news is not only restricted to cognitive perceptions of the economy but may also impact emotions about the economy: recent research demonstrated that news tone influences people’s emotional state (Lecheler et al., 2013; Na et al., 2010). Hence, we expect the following:

H$_1$: Frequently (a) watching television news and (b) reading newspapers negatively affect economic perceptions.

H$_2$: Frequently (a) watching television news and (b) reading newspapers negatively affect emotions about the economy.

News outlets can be split into two categories—hard/quality and soft/popular news: the formats have different effects on economic emotions and perceptions. Hard and soft news outlets on television and in newspapers cover different topics (political vs nonpolitical), rely on different styles (impersonal vs emotional), and take different perspectives (societal vs individual) (Reinemann et al., 2012). Instead of fact-based reporting, soft and popular news outlets are more likely than hard news outlets to cover economic news with more dramatic, personalized, and sensational stories in an attempt to appeal and engage their audience (Lehman-Wilzig and Seletzky, 2010; Vettehen et al., 2010). Economic news has been found to be more balanced and ambiguous in quality outlets, with more focus on diverse angles and perspectives than popular outlets, which are more negative (Svensson et al., 2017; Van Dalen et al., 2016). In addition, quality news outlets pay more attention to news about the economy than popular outlets (Damstra and Vliegenthart, in press). This soft news style potentially strengthens news exposure’s negative effect on economic perceptions and emotions for at least three reasons. First, by using exemplars, news increases emotional engagement with the story and is more likely to evoke emotions of anger and fear (Aarøe, 2011; Cho et al., 2003; Gross, 2008). Second, compared to factual reports with statistics, personal examples of news topics (e.g. unemployment, financial difficulties) increase the audience’s tendency to overestimate the severity of issues (Zillmann, 1999). Third, explicit focus on sensational elements in
(especially soft) news has also been shown to evoke emotions (Uribe and Gunter, 2007). We expect the following:

H3: Consuming (a) soft news television or (b) popular newspapers is more negatively related to economic perceptions than consuming hard news television or quality newspapers.

H4: Consuming (a) soft news television or (b) popular newspapers is more negatively related to emotions about the economy than consuming hard news television or quality newspapers.

How Perceptions and Emotions about the Economy Shape Anti-outgroup Attitudes

Intergroup threat theory (ITT) describes the process in which intergroup relations are perceived to be conflictual in nature (Riek et al., 2006). Outgroups, Muslims for example, are hypothesized to pose threats to the well-being of native citizens within society. Typically, both symbolic and realistic threats are distinguished. Symbolic threats arise due to perceived conflictual values and norms as well as outgroups’ perceived reluctance to integrate and adapt to the prevailing standards of society. Realistic threat entails two components: (a) perceived threats posed by outgroups to people’s physical safety (criminal component), and (b) the anticipation that outgroups may endanger the ingroups’ privileges and goods, such as money and jobs (economic component). With regard to religious outgroups, such as Muslims, often symbolic threats are emphasized. This study, however, explicitly deals with economic-based perceived threats, thereby complementing studies addressing perceived symbolic threats posed by Muslims.

An extensive body of literature has examined the role of economic motivations as a key factor determining anti-outgroup attitudes (Billiet et al., 2014; Citrin et al., 1997; Dancygier and Donnelly, 2013; Kunovich, 2013; Lancee and Pardos-Prado, 2013; Malhotra et al., 2013). The underlying justification originates from realistic group conflict theory (Blalock, 1967; Blumer, 1958; Quillian, 1995), which asserts that hostile attitudes toward a specific outgroup (usually ethnic or religious minorities, or immigrants) are inspired by rising levels of competition for scarce goods in society, typically jobs or social benefits (Esses et al., 1998). The presence of outgroups in society is anticipated to place a burden on government spending and to contribute to competition in the labor market, putting the often precarious social welfare system under pressure. In times of economic insecurity, citizens search for scapegoats to blame for worsening economic conditions (Kunovich, 2013). Following group conflict theory, the foundation of anti-outgroup attitudes is largely embedded in the economic sphere: economic insecurity elicits ethnic competition for scarce goods (Kunovich, 2013; Lancee and Pardos-Prado, 2013).

Regarding economic perceptions, studies assessing objective economic factors and subjective perceptions of the economic situation proclaim that particularly the latter are a critical determinant of anti-outgroup attitudes (Blalock, 1967; Lancee and Pardos-Prado, 2013; Malhotra et al., 2013). The psychological underpinning stems from the Thomas theorem: if men define situations as real, they are real in their consequences (Thomas and Thomas, 1928: 572). In terms of perceived economic threat from outgroups, studies emphasize the pervasiveness of sociotropic considerations about how a country’s economy is performing (Dancygier and Donnelly, 2013; Hainmueller et al., 2015).
Sociotropic considerations signal citizens’ perspectives on one of the most critical aspects of a society since the state of the economy affects the well-being and welfare of all citizens (Mutz, 1992). Evidence shows that sociotropic judgments of national economic performance are influential, whereas personal socioeconomic circumstances are of subordinate importance (Citrin et al., 1997). In line with group conflict theory, citizens’ subjective perceptions of how their country’s economy is doing (sociotropic considerations) should exert a strong influence on attitudes toward outgroups: the perception that the country’s economy is performing poorly is expected to give rise to feelings of competition in the labor market and to the perception that increasing outgroup presence places a financial burden on society, resulting in higher levels of anti-outgroup attitudes. Optimistic sociotropic considerations, however, should have the opposite effect.

Typically outgroups, such as immigrants or groups with different ethnic or religious backgrounds, are seen as undeserving. In many Western societies, Muslims are—as well as being seen as culturally and religiously distant and threatening—often perceived to have low socioeconomic status, contributing less to society. In the minds of the native population, Muslims are sometimes considered to be less entitled to particular rights and privileges, due to their reputation as intruders, outsiders, and free riders (Strabac and Listhaug, 2008). We therefore hypothesize that:

\[ H_5: \text{The more optimistic perceptions about the country’s economy are, the less negative attitudes toward Muslims will be.} \]

In addition to cognitive assessments of how a country’s economy is performing, social psychological studies have complemented the dominant line of research by including affective factors that may also shape attitudes toward Muslims (Mackie et al., 2008). Prior research, building upon intergroup emotions theory (Smith, 1993), showed that emotional responses are instrumental in shaping attitudes toward outgroups. Particular attention has been paid to negative emotions, most notably anger and fear (Brader et al., 2008; Cottrell and Neuberg, 2005; Mackie et al., 2008). Anger and fear are considered basic emotions, and arguing from a socio-functional approach, both emotional responses become prominent when essential resources and privileges are being endangered (Cottrell and Neuberg, 2005).

Individuals construct emotional responses toward economic reality, and these emotions may subsequently affect political attitudes (Berezin, 2009; Conover and Feldman, 1986). For instance, as noted by Eung Kyung Na et al. (2010: 125): \textit{People may be worried about the decrease of the export rate, angry about unemployment or inflation}. Following cognitive appraisal theory, particular situational characteristics are instrumental in eliciting distinct types of emotional responses (Roseman, 1991).

Various appraisals, about motivations, probability, and legitimacy, elicit particular emotions (Roseman, 1991). Anger is said to be easily activated when citizens find themselves constrained while attaining a specific goal (Cottrell and Neuberg, 2005); this holds particularly when citizens feel entitled to a specific outcome (Roseman, 1991). Fear is expected to prevail when a given threat signals future uncertainty (Cottrell and Neuberg, 2005) and when others—outgroups—are held responsible for a given outcome, resulting in feelings of a lack of control and insecurity. Economic uncertainty may therefore lead to the expression of negative emotions such as fear and anger. These negative emotions about the economy may subsequently impact anti-outgroup attitudes, like anti-Muslim attitudes, whenever outgroup presence is perceived to cause insecurity or vulnerability.
due to perceived unfairness in terms of economic and social benefits. Similarly, negative emotions about the economy may also affect anti-outgroup attitudes when outgroups are perceived to benefit from social resources or to compete on the labor market at the expense of citizens belonging to the dominant native majority.

In sum, the theoretical framework suggests that negative emotions about the economy may be determinants of anti-Muslim attitudes (Crites et al., 1994; Ottati et al., 1992). Extant studies have suggested that emotions may play a mediating role in the relationship between exposure to news frames about immigration and anti-immigrant attitudes (Kuhne and Schemer, 2015; Lecheler et al., 2013). We complement this line of research and focus specifically on emotions about the economy following group conflict theory. Since theory leads us to expect similar mechanisms for anger and fear, we hypothesize the following:

$$H_6:$$ Stronger negative emotions regarding the economy cause more negative attitudes toward Muslims.

This study complements prior work by considering the role of cognitive (economic perceptions) and affective (emotions) applications of economic evaluations as a mediator between news consumption and anti-Muslim attitudes. We suggest that one missing piece of the puzzle is the role of news consumption in shaping economic perceptions and emotional responses about the economy, which may subsequently impact anti-Muslim attitudes.

**Empirical Background: The Dutch Case**

The politicization of Islam (Strabac and Listhaug, 2008) makes the Netherlands a relevant case in which to consider effects of news consumption on anti-Muslim attitudes. Like other European countries, the Netherlands has witnessed the rise of radical-right parties: Geert Wilders’ Freedom Party (PVV) has won many votes during the recent elections and gained a substantial share of seats in parliament. The PVV adopts a fierce stance against Islamization and multiculturalism (Vossen, 2011). Public policies in the Netherlands have changed substantially, from being multicultural in nature in the 1980s, stressing the importance of socioeconomic participation of migrants in the 1990s, to emphasis on assimilation in the past decade-and-a-half (Duyvendak and Scholten, 2012). After 9/11, the terrorist attacks in Europe, and the assassinations of populist politician Pim Fortuyn in 2002 and filmmaker Theo van Gogh, the media and public debate changed considerably (Roggeband and Vliegenthart, 2007), with anti-Muslim framing and sentiments gaining a prominent place. Although European integration and the Schengen agreement resulted in substantial immigration from Central and Eastern Europe, public debates largely focus on outgroups with an Islamic background, mostly people with Moroccan and Turkish roots who strongly identify with Islam (Roggeband and Vliegenthart, 2007). They are the largest outgroup in Dutch society. Notably, Muslims are appraised more negatively by Dutch natives than any other outgroup (Hagendoorn, 1995).

The Dutch media landscape is characterized by a wide variety of media outlets that are independent from political parties and are highly professionalized. The Netherlands has a strong public broadcasting system, in which air time is divided among public broadcast organizations that originally represented different ideologically separated groups (“pillars”) in Dutch society based on their membership numbers (Vliegenthart, 2012). Typically, political actors and their political discourse about issues like the economy and integration are
prominent news topics (Kleinnijenhuis et al., 2001). Dutch news media are a dominant locus of political debate with a diversity of viewpoints and a multitude of issues being covered. The importance of news content in boosting anti-immigrant party support has been demonstrated empirically (Boomgaarden and Vliegenthart, 2007).

The Dutch economy was affected by the economic crisis that started in 2008. Recently, however, there has been a stabilization, increase in gross national product (GNP) and employment levels. Overall, economic news in the Netherlands follows economic developments, but is especially sensitive to negative ones (Hollanders and Vliegenthart, 2011).

Method

Data

We use data from a three-wave panel survey conducted in the first half of 2015 by I&O Research, an ISO-certified research company, among a sample of the Dutch adult population. Respondents were selected using random sampling from population registers, leaving no option for self-registering. The time between each wave was 8 weeks. Exact fielding dates were 23 February (Wave 1), 20 April (Wave 2), and 15 June 2015 (Wave 3). While respondents had 24 days to complete the survey, the majority did so in the first days after its opening. The survey was conducted online: Internet access is nearly universal in the Netherlands, with one of the highest rates (96%) globally. In the spring of 2015, the EU migration crisis erupted with many refugees fleeing from Muslim countries, making immigration a salient theme, adding relevance to our analysis. Between the waves, no major changes/events took place in terms of economic development, the latter showing mixed signs of economic recovery.

In all, 22,879 people older than 18 were invited to participate in Wave 1: 9112 started the questionnaire (response rate: 39.8%), of which 6386 completed the survey (completion rate: 70.1%). In Wave 2, only those respondents that participated in Wave 1 were invited again: 4301 respondents completed the questionnaire (completion rate: 69.0%). From those respondents, 3270 completed Wave 3 (completion rate: 77.0%). Our analysis includes those respondents who completed all three waves without missing values on the variables in the analysis, resulting in a final sample of 2694 adults. While dropout is significant, response rates are similar to or better than other recently published studies based on online surveys in the Dutch context (e.g. Burscher et al., 2015; Stolwijk et al., 2017). Our sample slightly deviates from the general Dutch population with an overrepresentation of older (M=61.45, standard deviation (SD)=11.08), male (66%), and highly educated respondents (51% obtained a university degree). These statistics do not differ substantially from those of all the participants in Wave 1. Since we are interested in the underlying mechanism rather than in drawing generalizable conclusions and providing population parameters, the slight deviations from the Dutch population are not too problematic for our purpose. Methodologically, in this case, a heterogeneous sample with considerable variation is sufficient.

We prefer not to use weights in our structural equation modeling (SEM) analyses, which brings its own issues and complications. Ideally, the sample would have been more representative. Yet, overrepresentation of highly educated people presents a conservative test of our hypotheses since this group typically displays lower anti-Muslim
attitudes and is less susceptible to media exposure. Importantly, our results correspond to findings in the literature based on relatively more representative samples.

Measurements

Dependent Variable. Being the most salient and heavily debated outgroup in the Netherlands (Hagendoorn, 1995), negative attitudes toward Muslims are studied as a clear case of anti-outgroup attitudes in the Dutch context. Prior research in Western Europe shows that hostile attitudes typically target outgroups which are non-European in origin, with distinct cultural, ethnic, and religious backgrounds, like Muslims (Semyonov et al., 2006). An attitude has been described by Martin Fishbein and Icek Ajzen (1975: 6) as a “learned predisposition to respond in a consistently favourable or unfavourable manner with respect to given object,” that is based upon belief patterns about these objects. We do not distinguish between Muslims who have acquired Dutch citizenship and those without (who may have a migration background); perceived membership of an outgroup is based on visible characteristics, rather than defined by citizenship or nationality, and public opinion does not differentiate using this criterion (Bloemraad and Schönwälder, 2013).

Attitudes toward Muslims were measured using respondents’ average assessment of three items which have been validated by prior longitudinal research (Socon project, see Gijsberts and Lubbers, 2009). These items were inspired by theory-building regarding Islamophobia and have been developed by experts in the field. The scale focuses on three types of antecedents of negative attitudes, relating to a social distance measure or symbolic threat, and elements of realistic threats. The scale is designed to capture various types of threats that are experienced in reference to Muslims.

The three statements were as follows: “Muslims are isolating themselves from Dutch society”; “Muslims easily use violence to solve their problems”; and “Muslims use their religion for political ends.” Answers were recorded on a 7-point scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”); these have been transformed into a summative scale, “Anti-Muslim attitudes.” A higher score indicates a more negative attitude and a lower score a more positive attitude toward Muslims (M=4.92, SD = 1.83). The unidimensionality of these items is shown by a principal component analysis (Wave 2: Cronbach’s α=0.84, explained variance: 75.83; Wave 3: α=0.86, explained variance: 77.38), confirming the scale’s internal consistency and reliability.

Mediators

Economic Perceptions. Economic perceptions are operationalized as citizens’ judgments of how the Dutch and EU economy has/will evolve(d) based on the internationally validated consumer confidence scale. These types of sociotropic considerations are considered effective indicators of economic perceptions (Mutz, 1992). Citizens are asked to judge the economic situation of the Netherlands and the EU, retrospectively (recent past) and prospectively (near future). Economic perceptions are measured on a scale constructed of four statements (“How do you think the economy of the Netherlands/European Union has/will evolve(d) in the past/following 12 months”), ranging from 1 (“economic situation has/will become worse”) to 10 (“economic situation has/will improve/d”). These items constitute a reliable scale of economic perceptions (α=0.89, explained variance: 77.92).
**Negative Emotions.** Statements referring to anger and fear about the economy are used to measure negative emotions since explicit references to these types of emotions have been theorized to affect political attitudes (Na et al., 2010; Roseman, 1991). The question was based on prior studies that measure concrete emotions in reference to a specific issue (Gross, 2008), even while caution is in order with regard to self-reported emotions: “If you think back about the occasions when you watched or read news about the economy in the past month, how strongly did you feel the following emotions: anger, frustration, fear, anxiety and nervousness?” Every emotion was rated on an 8-point scale from 1 (“not at all”) to 8 (“very strongly”). These items formed a reliable measure of negative emotions about the economy (α = 0.86, explained variance: 65.04%). Operationalizing anger and fear as separate factors resulted in less coherent scales. Since expectations for anger and fear are similar, one scale for both was included; additional analysis yielded similar results if they were included separately.

**Independent Variables.** The main independent, exogenous variables are news consumption variables for television news viewing and newspaper readership. We constructed variables measuring general television viewing and newspaper readership and detailed measures distinguishing between genres (popular vs quality newspapers; soft vs hard television news). News consumption was probed by asking, “If you think about an average week in the past 2 months, how often did you watch/read the following newscast/newspaper?” Scores ranged from 1 (“zero days”) to 8 (“seven days”).

To measure general television news consumption, we included the sum of how frequently respondents watched five daily newscasts: NOS Journaal, Nieuwsuur, RTL Nieuws, Hart van Nederland, and Editie NL. These are daily Dutch news programs. Next, we split these programs into hard news programs (NOS Journaal, Nieuwsuur, RTL Nieuws) and soft news programs (Hart van Nederland, Editie NL). This categorization is based on the empirically verified classification of Mark Boukes and Hajo Boomgaarden (2015) and confirmed by the finding that soft news, compared to hard news, is especially popular among lowly educated citizens with little political interest.

The measurement for general newspaper reading was created by summing responses of how often in an average week people read the following 10 newspapers: Telegraaf, Algemeen Dagblad, Volkskrant, NRC Handelsblad, NRC Next, Trouw, Financieel Dagblad, Reformatorisch Dagblad, Nederlands Dagblad, and Metro. Two, Telegraaf and Algemeen Dagblad, are clear examples of popular newspapers—and are combined in a measure for popular newspaper consumption. These outlets have the biggest readership, are characterized by relatively short stories, large illustrations and big headlines, and their readers are “popular news consumers” (Bos et al., 2016). Four newspapers can be identified as clear-cut quality newspapers with in-depth coverage, focusing on current affairs (Volkskrant, NRC Next, NRC Handelsblad, and Trouw). How often respondents read those four newspapers forms the measurement for quality newspaper consumption.

Ideally, we would include a measurement of the frequency of economic news consumption. Since the economy is one of the most salient news issues, respondents that frequently consume news in general are automatically often exposed to economic news, making general news consumption a proxy measure. A simple count of attention to the economy in news in the first half of 2015 (February until mid-July) shows that newspapers devote more attention to economic news than television news and that quality
newspapers and hard television programs report economic issues more often than popular newspapers and soft news programs. Importantly, economic news in popular outlets is more negative and focuses more on personification (Boukes and Vliegenthart, in press). Because of space restrictions in the survey, news consumption was only measured in Wave 1. However, as this is the exogenous variable in our model and because patterns in news consumption prove to be stable (Jacobs et al., 2016), this does not impose restrictions for the analyses.

**Control Variables.** Control variables related to perceptions and emotions about the economy or anti-Muslim attitudes have been included to reduce the risk of spurious effects. If significant results can be established for news consumption while controlling for alternative explanations, this adds more strength to the analysis by suggesting a role for news consumption on top of these variables.

First, sociodemographic background variables are included: gender (binary, 1 = male, 2 = female), age (continuous, in years), income (range 1–12, 12 = highest income), education (range 1–7, 7 = highest educational level), unemployment (binary, 1 = have become unemployed after leaving school, lost job), self-reported socioeconomic class (range 1–5, 5 = highest). Second, we included respondents’ political left-right ideology$^5$ (range 0–10, 10 = very right-wing), whether they voted for the anti-immigrant party PVV during the prior parliamentary elections (binary, 1 = yes)$^6$ and respondents’ political/economic knowledge (range 0–5, 5 = high knowledge). Third, the individual-level data were supplemented with real-life indicators about one’s neighborhood obtained from Statistics Netherlands at the municipal (% unemployment) and postal code level (% non-Western foreigners).$^7$ Details are given in Appendix A in Supplementary Material.

**Analysis**

The theory predicts indirect relationships between news consumption and anti-Muslim attitudes via economic perceptions and emotions about the economy (mediators; Table 1) Two models are tested: one for general news consumption patterns and the other in which different genres of news are distinguished. To test both the models, we have conducted SEM since this analysis technique is well-suited to identify (multiple) mediators and for estimating total, direct and indirect effects.

We made use of the longitudinal setup of the data by considering anti-Muslim attitudes (DV) in Wave 3, the mediators in Wave 2, and the independent and control variables in Wave 1. We also controlled for (lagged) anti-Muslim attitudes in Wave 2. Hence, the cause is always measured before the outcome and the analysis controls for the pre-existing attitude.

**Results**

**Model Fit**

The parameters show a good fit for both the theoretical models. The $\chi^2$ is not significant, the root mean square error of approximation (RMSEA) meets standard requirements (Model I: 0.003; Model II: 0.008), and the comparative fit index (CFI) is 1.000 in both the models (Figures 1 and 2).
Table 1. Hypothesized Relations between News Consumption, Optimistic Economic Perceptions and Negative Emotions, and Anti-outgroup Attitudes.

<table>
<thead>
<tr>
<th>Path</th>
<th>β</th>
<th>b</th>
<th>SE</th>
<th>p</th>
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<tr>
<td>Hypothesized relations Model I</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Economic perceptions ← Television news</td>
<td>–0.061**</td>
<td>–0.013</td>
<td>0.004</td>
<td>0.002</td>
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<td>Economic perceptions ← Newspapers</td>
<td>–0.006</td>
<td>–0.002</td>
<td>0.005</td>
<td>0.738</td>
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<tr>
<td>Negative emotions about economy ← TV</td>
<td>0.115***</td>
<td>0.031</td>
<td>0.005</td>
<td>0.000</td>
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<tr>
<td>Negative emotions about economy ← Newspapers</td>
<td>0.032</td>
<td>0.011</td>
<td>0.006</td>
<td>0.103</td>
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<tr>
<td>Anti-Muslim attitudes ← Economic perceptions</td>
<td>–0.043**</td>
<td>–0.047</td>
<td>0.017</td>
<td>0.005</td>
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<tr>
<td>Anti-Muslim attitudes ← Negative emotions about economy</td>
<td>0.030*</td>
<td>0.027</td>
<td>0.013</td>
<td>0.046</td>
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<tr>
<td>Anti-Muslim attitudes ← TV</td>
<td>0.008</td>
<td>0.002</td>
<td>0.003</td>
<td>0.589</td>
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<tr>
<td>Anti-Muslim attitudes ← Newspapers</td>
<td>0.035*</td>
<td>0.010</td>
<td>0.004</td>
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<tr>
<td>Hypothesized relations Model II</td>
<td></td>
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<td>Economic perceptions ← Hard TV news</td>
<td>–0.029</td>
<td>–0.008</td>
<td>0.006</td>
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<td>Economic perceptions ← Soft TV news</td>
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<td>–0.022</td>
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<td>Economic perceptions ← Popular newspapers</td>
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<td>0.024</td>
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<tr>
<td>Negative emotions about economy ← Hard TV news</td>
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<td>0.021</td>
<td>0.007</td>
<td>0.003</td>
</tr>
<tr>
<td>Negative emotions about economy ← Soft TV news</td>
<td>0.084***</td>
<td>0.054</td>
<td>0.013</td>
<td>0.000</td>
</tr>
<tr>
<td>Negative emotions about economy ← Quality newspapers</td>
<td>0.020</td>
<td>0.009</td>
<td>0.009</td>
<td>0.327</td>
</tr>
<tr>
<td>Negative emotions about economy ← Popular newspapers</td>
<td>0.024</td>
<td>0.010</td>
<td>0.010</td>
<td>0.217</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Economic perceptions</td>
<td>–0.042**</td>
<td>–0.054</td>
<td>0.017</td>
<td>0.007</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Negative emotions about economy</td>
<td>0.028*</td>
<td>0.025</td>
<td>0.013</td>
<td>0.062</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Hard TV news</td>
<td>–0.007</td>
<td>–0.002</td>
<td>0.004</td>
<td>0.651</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Soft TV news</td>
<td>0.016</td>
<td>0.009</td>
<td>0.009</td>
<td>0.238</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Quality newspapers</td>
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<td>–0.000</td>
<td>0.006</td>
<td>0.945</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Popular newspapers</td>
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<td>0.023</td>
<td>0.007</td>
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</tr>
<tr>
<td>N</td>
<td>2694</td>
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</tr>
</tbody>
</table>

SE: standard error. Model includes control variables (not displayed here). Entries are the result of a structural equation modeling (SEM) analysis in Amos 23. Reported are the standardized coefficients (β), unstandardized coefficients (b), standard errors (SE), and significance values (p). ***p < 0.001; **p < 0.01; *p < 0.05; ^p < 0.10 (two-tailed).

Effects of News Exposure on Perceptions and Emotions about the Economy

In Model I, watching television news is negatively associated with optimistic views about the economy in Wave 2 and positively associated with negative emotions about the economy in Wave 2, confirming H1a and H2a. Reading newspapers is not significantly
associated with economic perceptions or negative emotions regarding the economy, disconfirming H1_b and H2_b.

In Model II, we consider news consumption in detail by distinguishing between newspaper type and television news outlets. In line with H3_a, watching soft news on television negatively affects economic perceptions and, confirming H4_a, is positively associated with negative emotions regarding the economy. Watching hard television news, however, did not have a significant relationship with economic perceptions, but was positively associated with negative emotions regarding the economy.

Using a 95% bias-corrected 10,000 bootstraps interval for the user-defined estimands in Amos, findings show that the effect of soft news on negative emotions is slightly

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**Figure 1.** Hypothesized Theoretical Model: Television and Newspapers.
Model includes control variables, which are not displayed for reasons of clarity.
Entries are the result of an SEM analysis in Amos 23. Reported are the standardized coefficients (β) and significance values (p).
***p < 0.001; **p < 0.01; *p < 0.05.

**Figure 2.** Hypothesized Theoretical Model: Hard vs Soft Television News and Quality vs Popular Newspapers.
Model includes control variables, which are not displayed for reasons of clarity.
Entries are the result of an SEM analysis in Amos 23. Reported are the standardized coefficients (β) and significance values (p).
***p < 0.001; **p < 0.01; *p < 0.05; γ p < 0.10 (two-tailed).
stronger than that of hard news ($\Delta b = 0.033$, standard error (SE) = 0.018, 95% confidence interval (CI) = −0.003 to 0.078, $p = 0.069$). However, the effect of soft news on negative perceptions is not significantly stronger than the effect of hard news ($\Delta b = -0.014$, SE = 0.014, 95% CI = −0.042 to 0.014, $p = 0.314$).

$H_{3b}$ is confirmed: reading popular newspapers negatively predicts optimistic economic perceptions. Yet the positive relationship between reading popular newspapers and negative emotions about the economy is not significant, disconfirming $H_{4b}$. Furthermore, reading quality newspapers is not significantly related to economic perceptions or negative emotions. Bootstrapped estimates and CIs show that the effects of reading popular versus quality newspapers on economic perceptions ($\Delta b = -0.010$, SE = 0.011, 95% CI = −0.032 to 0.011, $p < 0.340$) and emotions did not differ significantly ($\Delta b = -0.008$, SE = 0.014, 95% CI = −0.035 to 0.018, $p = 0.539$).

**Effects of Economic Perceptions and Emotions on Anti-Muslim Attitudes**

While controlling for the lagged dependent variable (anti-Muslim attitudes in Wave 2), we find support for $H_5$ and $H_6$ in both the models: Economic perceptions and negative emotions about the economy mediate the relationship between news consumption and anti-Muslim attitudes (when tested separately, fear and anger yield similar though weaker effects, likely due to multicollinearity): the more positive the perceptions about the economy, the less negative attitudes toward Muslims. Stronger negative emotions about the economy predict more negative attitudes toward Muslims, even though the latter is borderline significant (two-tailed test).

**Direct, Indirect, and Total Effects of News Exposure on Anti-Muslim Attitudes**

Model I reveals a direct positive effect from reading newspapers on anti-Muslim attitudes, while watching television news is not significantly related to anti-Muslim attitudes. In Model II, there is a direct effect from popular newspapers on anti-Muslim attitudes; all other direct positive effects (quality newspapers, soft television news, hard television news) were insignificant.

Now we know that news exposure affects both perceptions and emotions about the economy and that these influence anti-Muslim attitudes, it is likely that the indirect effect is significant. We formally test this employing a 95% bias-corrected 10,000 bootstraps interval for the user-defined indirect effect in Amos. For Model I, both indirect effects of exposure to television news through economic perceptions ($b = 0.001$, SE = 0.000, 95% CI = 0.000 to 0.002, $p = 0.009$) and emotions ($b = 0.001$, SE = 0.000, 95% CI = 0.000 to 0.002, $p = 0.041$) were significant. However, indirect effects of newspaper consumption through economic perceptions ($b = 0.000$, SE = 0.000, 95% CI = 0.000 to 0.001, $p = 0.633$) and emotions ($b = 0.000$, SE = 0.000, 95% CI = 0.000 to 0.001, $p = 0.074$) were not significant.

For Model II, the indirect effect of exposure to hard television news through economic perceptions was not significant ($b = 0.000$, SE = 0.000, 95% CI = 0.000 to 0.001, $p = 0.128$), while for emotions it was significant ($b = 0.001$, SE = 0.000, 95% CI = 0.000 to 0.001, $p = 0.037$). The indirect effects of quality newspapers consumption through economic perceptions ($b = 0.000$, SE = 0.000, 95% CI = −0.002 to 0.000, $p = 0.337$) and emotions ($b = 0.000$, SE = 0.000, 95% CI = 0.000 to 0.001, $p = 0.220$) were insignificant as well.
However, both indirect effects of exposure to soft television news through economic perceptions ($b = 0.002$, $SE = 0.001$, 95% CI = 0.000 to 0.004, $p = 0.037$) and emotions ($b = 0.002$, $SE = 0.001$, 95% CI = 0.000 to 0.004, $p = 0.043$) were significant. Finally, the indirect effects of exposure to popular newspapers through economic perceptions were significant ($b = 0.001$, $SE = 0.000$, 95% CI = 0.000 to 0.003, $p = 0.029$), but not for emotions ($b = 0.000$, $SE = 0.000$, 95% CI = 0.000, 0.002, $p = 0.154$). Altogether, we find softer/popular media to have several indirect effects on anti-Muslim attitudes, while for the hard/quality outlets this was barely the case.

Finally, we test whether the total effects of news exposure on anti-Muslim attitudes are significant, using a 95% bias-corrected bootstraps interval (10,000 times) for total standardized effects in Amos. For Model I, the total effect of exposure to television news (at $t_1$) on anti-Muslim attitudes (at $t_3$) ($\beta = 0.086$, $SE = 0.018$, 95% CI = 0.050 to 0.122, $p < 0.001$) and the total effect of exposure to newspapers (at $t_1$) on anti-Muslim attitudes (at $t_3$) are positive and significant ($\beta = 0.056$, $SE = 0.018$, 95% CI = 0.020 to 0.092, $p = 0.001$).

In Model II, the total effect of exposure to quality newspapers on anti-Muslim attitudes is negative, but not significant ($\beta = -0.033$, $SE = 0.020$, 95% CI = -0.072 to 0.007, $p = 0.098$), while the total effect of exposure to popular newspapers on anti-Muslim attitudes is positive and significant ($\beta = 0.122$, $SE = 0.019$, 95% CI = 0.086 to 0.159, $p < 0.001$). Similarly, whereas the total effect of exposure to hard television news on anti-Muslim attitudes is positive but insignificant ($\beta = 0.032$, $SE = 0.020$, 95% CI = -0.007 to 0.072, $p = 0.107$), the total effect of exposure to soft television news is positive and significant ($\beta = 0.062$, $SE = 0.020$, 95% CI = 0.024 to 0.101, $p = 0.002$). For total effects, especially popular newspapers and soft television news matter.

Our proposed theoretical model is thus confirmed: the relationship between news consumption and anti-Muslim attitudes is mediated by economic perceptions and negative emotions about the economy, although this is conditional upon the type of outlet (mostly TV) and genre (soft/popular forms of news). Effects are small, but meaningful.

**Control Variables**

Table 2 shows the relationships between the dependent variable, mediators, and control variables for Models I and II. Except where explicitly noted, results are similar for both the models. Regarding economic perceptions, we observe that the higher respondents’ income, education, social class, and political/economic knowledge, the more optimistic their perceptions about the economy. PVV voters have less positive economic perceptions. Right-wing respondents have a more optimistic economic outlook. Neighborhood characteristics matter too: respondents living in areas with high unemployment have less optimistic economic perceptions, whereas a higher number of non-Western foreigners are positively related to optimistic economic perceptions. Regarding negative emotions, a higher income and self-reported social class strongly reduce negative emotions about the economy; older respondents and PVV supporters hold more negative emotions about the economy.

In terms of anti-Muslim attitudes, the strongest predictor is respondents’ anti-Muslim attitude in Wave 2 (lagged DV). Unsurprisingly, having a right-wing orientation and having voted for PVV is positively related to anti-Muslim attitudes. Women and the highly educated report lower levels of anti-Muslim attitudes.
### Table 2. Model I and Model II: Relationship between Dependent Variable, Mediators, and Control Variables.

<table>
<thead>
<tr>
<th>Path</th>
<th>Model I</th>
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<th>Model II</th>
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<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>b</td>
<td>SE</td>
<td>( \beta )</td>
<td>b</td>
<td>SE</td>
</tr>
<tr>
<td>Economic perceptions ← Income level</td>
<td>0.058***</td>
<td>0.048</td>
<td>0.019</td>
<td>0.010</td>
<td>0.059***</td>
<td>0.048</td>
</tr>
<tr>
<td>Economic perceptions ← Unemployed</td>
<td>−0.020</td>
<td>−0.159</td>
<td>0.149</td>
<td>0.738</td>
<td>−0.020</td>
<td>−0.162</td>
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<tr>
<td>Economic perceptions ← Educational level</td>
<td>0.044*</td>
<td>0.039</td>
<td>0.020</td>
<td>0.048</td>
<td>0.031</td>
<td>0.027</td>
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<tr>
<td>Economic perceptions ← Self-reported social class</td>
<td>0.139***</td>
<td>0.230</td>
<td>0.040</td>
<td>0.000</td>
<td>0.135***</td>
<td>0.224</td>
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<tr>
<td>Economic perceptions ← Age</td>
<td>−0.026</td>
<td>0.003</td>
<td>0.002</td>
<td>0.217</td>
<td>0.018</td>
<td>0.002</td>
</tr>
<tr>
<td>Economic perceptions ← Gender</td>
<td>−0.030</td>
<td>−0.077</td>
<td>0.053</td>
<td>0.146</td>
<td>−0.028</td>
<td>−0.083</td>
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<tr>
<td>Economic perceptions ← Left-right ideology</td>
<td>0.065***</td>
<td>0.043</td>
<td>0.013</td>
<td>0.000</td>
<td>0.079***</td>
<td>0.052</td>
</tr>
<tr>
<td>Economic perceptions ← % unemployed</td>
<td>−0.047*</td>
<td>−0.043</td>
<td>0.021</td>
<td>0.036</td>
<td>−0.046*</td>
<td>−0.042</td>
</tr>
<tr>
<td>Economic perceptions ← % non-Western foreigners</td>
<td>0.056*</td>
<td>0.627</td>
<td>0.267</td>
<td>0.036</td>
<td>0.056*</td>
<td>0.671</td>
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<tr>
<td>Economic perceptions ← Political/economic knowledge</td>
<td>0.064***</td>
<td>0.080</td>
<td>0.024</td>
<td>0.001</td>
<td>−0.189***</td>
<td>−1.143</td>
</tr>
<tr>
<td>Economic perceptions ← PVV vote</td>
<td>−0.193***</td>
<td>−1.168</td>
<td>0.114</td>
<td>0.000</td>
<td>0.062***</td>
<td>0.077</td>
</tr>
<tr>
<td>Negative emotions about economy ← Income level</td>
<td>−0.047*</td>
<td>−0.047</td>
<td>0.019</td>
<td>0.010</td>
<td>−0.046*</td>
<td>−0.046</td>
</tr>
<tr>
<td>Negative emotions about economy ← Unemployed</td>
<td>0.036*</td>
<td>0.356</td>
<td>0.185</td>
<td>0.054</td>
<td>0.036*</td>
<td>0.359</td>
</tr>
<tr>
<td>Negative emotions about economy ← Educational level</td>
<td>0.004</td>
<td>0.005</td>
<td>0.024</td>
<td>0.846</td>
<td>0.011</td>
<td>0.012</td>
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<tr>
<td>Negative emotions about economy ← Self-reported social class</td>
<td>−0.159***</td>
<td>−0.322</td>
<td>0.040</td>
<td>0.000</td>
<td>−0.158***</td>
<td>−0.318</td>
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<tr>
<td>Negative emotions about economy ← Age</td>
<td>−0.103***</td>
<td>−0.160</td>
<td>0.003</td>
<td>0.000</td>
<td>−0.094***</td>
<td>−0.114</td>
</tr>
<tr>
<td>Negative emotions about economy ← % unemployed</td>
<td>0.017</td>
<td>0.019</td>
<td>0.025</td>
<td>0.446</td>
<td>0.017</td>
<td>0.019</td>
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<tr>
<td>Negative emotions about economy ← % non-Western foreigners</td>
<td>−0.041*</td>
<td>−0.601</td>
<td>0.333</td>
<td>0.000</td>
<td>−0.039*</td>
<td>−0.560</td>
</tr>
<tr>
<td>Negative emotions about economy ← Political/economic knowledge</td>
<td>−0.025</td>
<td>−0.039</td>
<td>0.030</td>
<td>0.192</td>
<td>−0.019</td>
<td>−0.029</td>
</tr>
<tr>
<td>Negative emotions about economy ← PVV vote</td>
<td>0.104***</td>
<td>0.763</td>
<td>0.139</td>
<td>0.000</td>
<td>0.101***</td>
<td>0.739</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Anti-Muslim attitudes t – 1</td>
<td>0.626***</td>
<td>0.617</td>
<td>0.015</td>
<td>0.000</td>
<td>0.620***</td>
<td>0.612</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Left-right ideology</td>
<td>0.086***</td>
<td>0.062</td>
<td>0.010</td>
<td>0.000</td>
<td>0.076***</td>
<td>0.054</td>
</tr>
<tr>
<td>Anti-Muslim attitudes ← Educational level</td>
<td>−0.089***</td>
<td>−0.086</td>
<td>0.014</td>
<td>0.000</td>
<td>−0.076***</td>
<td>−0.075</td>
</tr>
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</table>

(Continued)
Table 2. (Continued)

<table>
<thead>
<tr>
<th>Path</th>
<th>Model I</th>
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<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$b$</td>
<td>SE</td>
<td>$p$</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Gender</td>
<td>$-0.036^{***}$</td>
<td>$-0.118$</td>
<td>0.045</td>
<td>0.010</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Political/economic knowledge</td>
<td>$-0.001$</td>
<td>$-0.001$</td>
<td>0.020</td>
<td>0.941</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ PVV vote</td>
<td>$0.035^{*}$</td>
<td>0.232</td>
<td>0.095</td>
<td>0.015</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Income level</td>
<td>$-0.041^{?}$</td>
<td>$-0.037$</td>
<td>0.020</td>
<td>0.057</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Unemployed</td>
<td>$-0.005$</td>
<td>$-0.049$</td>
<td>0.157</td>
<td>0.755</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Educational level</td>
<td>$-0.111^{***}$</td>
<td>$-0.108$</td>
<td>0.021</td>
<td>0.000</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Self-reported social class</td>
<td>$-0.049^{?}$</td>
<td>$-0.090$</td>
<td>0.042</td>
<td>0.035</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Age</td>
<td>$-0.036^{?}$</td>
<td>$-0.005$</td>
<td>0.003</td>
<td>0.055</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Gender</td>
<td>$-0.092^{***}$</td>
<td>$-0.302$</td>
<td>0.059</td>
<td>0.000</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Left-right ideology</td>
<td>$0.274^{***}$</td>
<td>0.200</td>
<td>0.013</td>
<td>0.000</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ % unemployed</td>
<td>0.010</td>
<td>0.010</td>
<td>0.006</td>
<td>0.668</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ % non-Western foreigners</td>
<td>$-0.003$</td>
<td>$-0.042$</td>
<td>0.297</td>
<td>0.887</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ Political/economic knowledge</td>
<td>$-0.010$</td>
<td>$-0.013$</td>
<td>0.026</td>
<td>0.609</td>
</tr>
<tr>
<td>Anti-Muslim attitudes $\leftarrow$ PVV vote</td>
<td>$0.169^{***}$</td>
<td>1.130</td>
<td>0.121</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2694</td>
<td></td>
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</tbody>
</table>

PVV: Freedom Party.

Entries are the result of an SEM analysis in Amos 23. Reported are the standardized coefficients ($\beta$), unstandardized coefficients ($b$), standard errors (SE) and significance values ($p$).

$^{***} p<0.001; ^{**} p<0.01; ^{*} p<0.05; ^{?} p<0.10$ (two-tailed).
**Discussion**

This study sought to develop a theoretical model that improves our understanding of the role of news consumption in explaining anti-Muslim attitudes. Building on group conflict theory (Blalock, 1967; Blumer, 1958), we argue that exposure to news increases negative perceptions and emotions about the economy, which in turn foster anti-Muslim attitudes. Hence, this study makes a theoretical contribution by shedding light on the *mechanism* through which news consumption contributes to anti-Muslim attitudes. Particular attention was paid to the importance of subjective evaluations by examining both cognitive (economic perceptions) and affective measurements (emotions about the economy).

The findings offer clear support for the proposed theoretical model, confirming the relevance of news consumption and realistic group conflict theory (Billiet et al., 2014; Blalock, 1967; Lancee and Pardos-Prado, 2013; Quillian, 1995): Perceptions and emotions about the economy mediate the relationship between news consumption and anti-Muslim attitudes. This relationship holds while controlling for a wide variety of socioeconomic variables, predispositions, and real-world indicators, demonstrating the effects of news consumption on top of these factors. News consumption, hence, should not be overlooked as a factor contributing directly to economic perceptions and emotions as well as indirectly to anti-Muslim attitudes.

These findings clarify the mechanism through which news consumption affects public opinion about Muslims. The relationship between news consumption and anti-Muslim attitudes seems to be partly indirect, running through economic motivations. An innovative finding is that news exposure not only operates at a cognitive level by affecting economic perceptions (Hollanders and Vliegenthart, 2011), but that it is also instrumental in eliciting negative emotions about the economy, most notably fear and anger, which intensify hostile attitudes toward Muslims. Hence, the findings corroborate the suggestion that whenever studying the relationship between news exposure and attitudes, one should not overlook the mediating role of affective measures and emotions (Kuhne and Schemer, 2015; Lecheler et al., 2015). A key contribution of our study, these results imply that attitudes toward Muslims are not only subject to symbolic threats (Strabac and Listhaug, 2008), but that economic threats have an influence as well. This suggests that both symbolic and realistic threats can offer independent explanations for hostility toward Muslims, as is suggested by ITT (Riek et al., 2006).

In addition, there are direct effects of news consumption on anti-Muslim attitudes as well for popular and soft news outlets. Possibly, these effects could be attributed to their specific reporting style: while covering immigration-related topics, these outlets arguably adhere more to a sensational reporting style, with emphasis on conflict, negativity, and negative emotions (Jacobs et al., 2016).

One important nuance, however, is that the mechanism is largely dependent on the type of news outlet and genre. Watching television news is positively associated with pessimistic sociotropic considerations and negative emotions about the economy, which in turn intensifies anti-Muslim attitudes, while general newspaper readership had no impact. Disentangling various types of news genres demonstrates that especially exposure to soft television news and popular newspapers affects citizens’ perceptions and emotions about the economy. This presumably is the consequence of their more clear-cut emotional nature, emphasis on conflict and negativity, and use of exemplars (Lehman-Wilzig and Seletzky, 2010; Reinemann et al., 2012).
Moreover, that television news especially matters for emotions (Cho et al., 2003) can be explained by prior research showing that coverage of outgroups on television news is rather emotional in nature with many references to negative emotions such as fear and anger (Jacobs et al., 2016). While such television content reaches the viewer through moving visuals, audio, and even text, newspapers, particularly quality newspapers, are static and known to cover issues in greater depth, using thematic framing, which might explain why they seem to have smaller effects on perceptions and emotions (Cho et al., 2003). Hence, these differential effects for the type of outlet and news genre demonstrate that it is imperative to recognize the diversity of the media landscape by adopting fine-grained measures of news consumption.

Some limitations should be acknowledged. First, although the negativity bias in economic news is well established (Ju, 2008; Soroka, 2006), future studies could combine our panel-survey approach with content analysis. Second, future studies should expand the scope by including more outgroups and contexts to assess the findings’ generalizability. It is likely that similar mechanisms affect attitudes regarding other outgroups than Muslims only, and possibly stronger effects play out for outgroups that are primarily associated with economic threat (e.g. East Europeans). Finally, we cannot be fully conclusive on causality, although we took multiple steps (use of temporal ordering of variables via panel data, inclusion of control variables, and lagged dependent variable). Nevertheless, more efforts are needed to strengthen current findings, which point to correlation and, possibly, a causal one.

In conclusion, this study offers several additions to the literature: first, it clarifies the origin of economic threat and group conflict by showing that news exposure is a relevant factor in shaping citizens’ perceptions and emotions about the economy. Second, the findings shed light on the complex process underlying media effects on anti-outgroup attitudes by demonstrating that this relationship is indirect and is mediated by economic motivations. Third, it validates that next to symbolic and physical threats, attitudes about Muslims are also affected by economic threats that originate from news coverage. Finally, it shows that one should be aware of the differential effects various types of news outlets may have rather than speaking of a media effect in general.

Funding
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Supplementary Information
Additional supplementary information may be found with the online version of this article.

Notes
1. The mean for anti-Muslim attitudes between the waves was similar, attenuating the possibility that the migration crisis has affected our study’s results, although it may have made the immigration issue more salient. No exceptional events with regard to immigration took place in the Netherlands during the observation period (protests against asylum centers only burst out in autumn 2015).
2. Still, analyses yielded almost identical results when weighted for sex, age, and education: relationships were still largely the same and pointed to the same direction.
3. To validate this assumption, we conducted a search in the news database LexisNexis by selecting all news about the economy in the main Dutch newspapers via a set of keywords: On average, 20% of all news coverage deals with economic issues, verifying that economic news makes up a large share of the total news. Results are available from authors upon request.
4. This figure shows attention for the economy in the various outlets.

<table>
<thead>
<tr>
<th>Hard TV news</th>
<th>Soft TV news</th>
<th>Quality newspapers</th>
<th>Popular newspapers</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOS: 121</td>
<td>Hart van NL: 7</td>
<td>NRC Handelsblad: 709</td>
<td>AD: 540</td>
</tr>
<tr>
<td>RTL Nieuws: 124</td>
<td>Volkskrant: 688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total 362</td>
<td>Total: 21</td>
<td>Total: 1907</td>
<td>Total: 975</td>
</tr>
</tbody>
</table>

5. Self-reported left-right orientation has been criticized, but we took steps to ascertain the validity of this variable. First, it is routinely included as a proxy for partisanship and has been shown to offer basic insight into political ideology (especially when complemented with other measures; Mair, 2007). Second, the scale correlates in the expected direction with support for specific Dutch political parties. Third, the variable is normally distributed and yields similar results as the European Social Survey (ESS) using a representative sample.

6. Freedom Party (PVV) support and left-right ideology are included as controls to capture symbolic threat perceptions by participants. PVV support and having a right-wing ideology are closely linked to such threat perceptions and prejudice. Both are narrowly associated with social psychological value patterns, such as Social Dominance Orientation (SDO). SDO denotes people’s preference for hierarchy and domination over (perceived) lower status groups, attesting to an anti-egalitarian attitude within and across groups. PVV support and left-right ideology, hence, have a cultural (i.e. symbolic) component. PVV voters are partly motivated by cultural reasons, out of a desire to protect Dutch culture from alien influence (Vossen, 2011). Similarly, the left-right divide within society is partly determined by a cleavage with regard to sociocultural issues (Mair, 2007). Finally, inclusion of the lagged dependent variable of anti-Muslim attitudes accounts for omitted variable bias; most likely this prior attitude incorporates the existing (symbolic) threat experienced by respondents.

7. While individuals are often nested within groups in a multilevel analysis to control for data dependency, the number of groups is so high (359 municipalities, 1452 postal codes) that the variance in percentage unemployment and non-Western foreigners in one’s neighborhood can be treated as an individual-level characteristic.

References


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