



BMJ Open Content analysis of Dutch newspaper coverage of three tobacco control policies, 2017–2019

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ABSTRACT

Objectives News media coverage can influence support for and implementation of tobacco control policies. This research aims to analyse and compare newspaper coverage of newly implemented policies: a substantial tobacco tax increase, point-of-sale display ban and plain packaging.

Design We conducted a content analysis of articles covering the three policies from ten national Dutch newspapers. Articles published between November 2017 and November 2019 were coded for type and tone. The policy dystopia model was used to code arguments opposing the policies. Tobacco industry appearances in news articles were also analysed for frequency and type.

Results A total of 134 news articles were analysed, of which the industry appeared in 28%. The majority of coverage was neutral in tone, although among articles that were coded as expressing a positive or negative tone, plain packaging and the point-of-sale ban were portrayed more negatively than positively. Negative coverage was predominantly accounted for by industry presence. Arguments opposing the policies focused on negative economic consequences, challenging the need for policy and adverse consequences for retailers for tax, plain packaging and the point-of-sale display ban, respectively. We identified six specific new arguments that fit within existing domains of the policy dystopia model.

Conclusions The tobacco industry and its allies still appear in a substantial proportion of news articles in relation to tobacco policy. This study identifies contemporary industry arguments against tobacco control policies in Europe which, alongside the policy dystopia model, can be used to predict and counter the tobacco industry's future attempts to oppose policies.

INTRODUCTION

Tobacco tax increases, point-of-sale (POS) display bans and plain packaging have been effective in reducing smoking among youth and adults, reducing pack appeal and expectations of cigarette taste, decreasing unplanned cigarette purchases and reducing sales and tobacco industry revenue.^{1–4} As such, these policies are prescribed in the guidelines of the Framework Convention on Tobacco Control^{5,6} and have received intense backlash from the tobacco industry and its allies.^{7–11}

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ We assessed the portrayal of several tobacco control policies which enabled us to compare coverage across policies within the same cultural, geographical and political context.
- ⇒ Interpretations of the policy dystopia model and new additions to the model were discussed with an original author of the model.
- ⇒ A limitation is that it was not feasible for us to include other electronic or social media and so this analysis focuses on newspaper articles as a proxy for media coverage more generally.

A substantial tax increase, POS display ban and plain packaging were some of the first policies to be implemented from the Dutch National Prevention Agreement (Nationaal Preventieakkoord) in the Netherlands, which aims to achieve a smoke-free generation (<5% of the adult population smoking nationally) by 2040.¹² In 2020, the adult smoking prevalence was 20.2%.¹³ The proposed measures included a substantial tobacco tax increase of €1 in April 2020, a POS display ban in supermarkets in July 2020 and the introduction of plain packaging in October 2020. The agreement was made by more than 70 organisations in the Netherlands such as health insurers, sport associations, patient organisations and local governments to tackle smoking, overweight and alcohol consumption and was coordinated and presented by the Dutch Ministry of Health, Welfare and Sports. Aside from civil society-led campaigns and policies implemented from the European Tobacco Products Directive, this agreement contained the first major national policies to address smoking in the Netherlands since the ban of sale to under-18s in 2014.¹⁴ The agreement also included policy intentions for the coming years, such as a reduction in the number of points-of-sale and a ban on smoking rooms within workplaces.¹²

Tobacco-related issues have previously garnered extensive media attention,^{15–17} with tobacco control policy receiving the most coverage.¹⁵ Furthermore, news coverage on smoking and tobacco policies is associated with declines in youth and adult smoking and has been shown to have impacts on support for tobacco control and policy progression.^{18–22} How issues such as tobacco control policy are characterised in news media, known as framing, is important as it can determine the way in which an issue is defined and understood by the audience.²³ Journalists use framing as a means to present complex information in such a way that resonates with the reader's existing understanding of the issue, in turn reducing the issue's complexity.²³

The tobacco industry's use of the media to voice its arguments opposing policy, reframe the discussion and disseminate industry-sponsored research is well documented.^{24,25} Furthermore, these strategies and arguments are consistently applied.²⁵ The strategies the industry uses to oppose tobacco control policies are identified in the evidence-based policy dystopia model (PDM),²⁵ so-called due to the creation of an overall dystopic narrative by the tobacco industry to oppose tobacco reform. Within this narrative, costs of tobacco control to society, the economy, the tobacco industry and public health are manufactured or exaggerated and benefits to society are suppressed or denied. The PDM dichotomises industry efforts to oppose policies into action-based and argument-based strategies. For the latter, it identifies both specific arguments and domains in which these sit. As such, the PDM has the potential to be used as a tool to anticipate and counteract the tobacco industry and for content analyses.²⁵ Using the PDM as a tool to examine news coverage allows us to understand which contemporary arguments the industry uses in the public sphere; this is important given the systematic reviews underlying the PDM were undertaken almost a decade ago.

With this study, we examine the prevalence and nature of tobacco industry arguments and the extent of support and opposition for these policies portrayed in Dutch national newspapers. National newspapers are used in the current study as a proxy for media coverage. Tobacco control issues have received substantial newspaper coverage.^{17,26} While social media and online news sites become increasingly relevant as a source of news, there is evidence to suggest that newspapers remain influential in the shaping of public opinion and policy.^{27–29} We focus on identifying tobacco industry arguments in this paper as this information is most relevant to (Dutch) civil society in anticipating tobacco industry activity in opposing current and future policies.

Where most previous media analysis studies have focused on one policy, the announcement of three policies offers a unique opportunity to compare media coverage of different tobacco control policies within the same cultural, geographical and political context and examine whether opposition is concentrated on specific policies.

The aims of this study are to (1) track the coverage over time of the three policies (a substantial tobacco tax increase, plain packaging and the POS display ban) in Dutch newspapers, (2) analyse the extent to which these policies are generally supported or opposed in Dutch newspapers, (3) examine the nature and frequency of tobacco industry appearances in Dutch newspapers and (4) determine to what extent and which oppositional tobacco industry arguments are voiced in Dutch newspapers. Alongside the latter aim, any new opposing arguments found are displayed in an expanded PDM to provide an overview of all arguments found.

METHODS

Newspaper article selection

Print and online articles from national Dutch newspapers dating between November 2017—1 year before the announcement of the National Prevention Agreement—and November 2019—1 year after, were included in the analysis. November 2017 was chosen as the starting date to capture coverage of any possible leaks in information on the agreement and the run up to the announcement. Newspaper articles were retrieved from an online database of published news articles (LexisNexis). NLP, BvS and GEN repeatedly discussed, tested and refined the search string until it performed satisfactorily (ie, with high sensitivity). The final search string consisted of the following groups of terms in Dutch: words relating to smoking and tobacco and words relating to the three policies (tobacco tax increase, plain or standardised packaging, and the POS display ban). The search was performed for the ten most-read national daily Dutch newspapers to capture the coverage for a wide audience and readers with different (political) preferences: *Algemeen Dagblad*, *De Telegraaf*, *De Volkskrant*, *Het Financieele Dagblad*, *Metro (free)*, *Nederlands Dagblad*, *NRC Handelsblad*, *NRC Next*, *Reformatisch Dagblad* and *Trouw* (with an average spread of print circulation per issue ranging from 19 593 to 3 855 501).

All articles were downloaded from LexisNexis and organised by month of publication for screening. This search produced 5425 news articles. All exact duplicate articles were excluded from analysis. The resulting sample still includes partial duplicates that appeared in different newspapers.

Inclusion criteria were: the article mentioned one or more of the three policies in relation to the national Dutch setting and was published in the Dutch version of the specified newspapers (and not Belgian). The first author and a member of supporting staff screened 15% of the articles against these inclusion criteria, with an agreement of kappa (K)=0.77. Where there was disagreement, articles were reviewed and discussed until agreement was reached. Supporting staff screened all the remaining articles. We prioritised high sensitivity over high specificity in our search string and therefore many articles were excluded on the basis that they did not cover any of the three policies or included mention of smoking

in narrative pieces outside the context of tobacco control. This procedure resulted in 134 articles that mentioned or discussed one or more of the three policies.

Coding of newspaper articles

Descriptors (article title, date, author, length of article) were recorded for each article and were grouped by month of publication to analyse coverage over time. As was done in similar studies, we coded type of article (*News* (factual account of issues or events), *Editorial* (opinion of newspaper or columnist on an issue) or *Letters/Comments* (letters to the editor, readers' comments sections)) and which of the three policies were mentioned. Overall article tone (stance expressed regarding tobacco control policies mentioned as a whole, this included other mentioned policies not part of our current analysis), and tone for each policy was coded as either *Positive* (only support expressed for the policy measure), *Negative* (only opposition expressed to the policy), *Neutral* (no opinion expressed) or *Mixed* (both support and opposition for the policy expressed). NLP was trained by BvS, who has extensive experience in conducting qualitative research. All 134 articles were double-coded by two researchers (NLP and BvS). Disagreements were discussed between NLP and BvS and where necessary with GEN until agreement was achieved. Data was collated in Excel and later imported into SPSS (V.26) to perform descriptive statistics.

Tobacco industry appearances

In addition, the frequency and nature of tobacco industry appearances (the tobacco industry and industry allies) in the news articles was also coded by NLP and BvS. The tobacco industry and allied groups were defined as: tobacco product manufacturers, associations for retail and tobacco and e-cigarette manufacturing, smokers' interest groups, the Confederation for Netherlands Industry and Employers, or firms and individuals that are paid by the tobacco industry. For this, a list of industry allies was used that is not publicly available and was created by Dutch investigative journalists researching the tobacco industry. For articles in which the tobacco industry or allied groups appeared in the article, this appearance was coded as authored, quoted or mentioned in the article. As policies outside of the scope of this study were also discussed in some of the articles, we clarified whether the coded industry appearance was in response to the three policies or to other tobacco control topics.

Coding of opposing arguments

The PDM provided a framework to code tobacco industry arguments.²⁵ The coding scheme consisted of the 20 arguments from the PDM, with the possibility to add new arguments. When initial coding took place, we discovered differing semantic interpretations for some of the PDM arguments, resulting in low inter-coder reliability ($K=0.22$). For example, 'government is unreasonable/unaccountable' was a common source of disagreement. Discussion and clarification of the original

Table 1 Count of policy mentions in each type of newspaper article (n=134)

	News	Editorial	Letters/comments	Total
Tax increase	69	21	13	103
Plain packaging	41	9	9	59
Display ban	52	7	7	66

PDM arguments with ABG resolved disagreements. Differences in the interpretation of arguments were potentially due to one of the researchers being a non-native Dutch speaker. We proceeded by double-coding all opposing arguments. Any and all disagreements were discussed at regular intervals between NLP and BvS, and with GEN where necessary until consensus was reached. Correct interpretation of PDM arguments, new arguments found in the news articles and the final updated PDM framework was discussed between and checked by all authors and ABG, senior coauthor of the original PDM.

Patient and public involvement

Patients and the public were not involved in any way in the joint setting of research priorities, defining research questions and outcome measures, providing input into study design and conduct or dissemination of results.

RESULTS

Volume and type of news media

Of the 134 included articles, most were news items (table 1) and the tax increase received the most attention overall in the period studied. Figure 1 shows the volume of coverage as a whole and for the individual policies over time. The two most circulated newspapers accounted for 42% of the total coverage.

Spikes in coverage were seen with in November 2018 (figure 1) when the National Prevention Agreement was announced and in September 2019 when parliament debated the Agreement.

Tobacco industry appearances

Thirty-eight articles (of the 134 we analysed) included appearances from the tobacco industry and its allies in which they addressed one or more of the three policies directly; this includes when the industry was mentioned (n=5) or quoted (n=33) or when they authored (n=5) an article. As such, the tobacco industry and allies authored an article or were quoted on (one or more of) the three policies in 28% of the 134 articles. The majority of appearances were made by trade associations for tobacco retail and manufacturing. Industry-authored articles were featured in the two most-circulated newspapers (*De Telegraaf* and *Algemeen Dagblad*). Of the authored articles, four were written by the director of the Association of Dutch Cigarette and Fine Cut Tobacco Manufacturers (*Vereniging Nederlandse Sigaretten- en Kerftabakfabrikanten* (VSK)) and one was written by a former political party leader and opinion-leader paid by VSK for a campaign

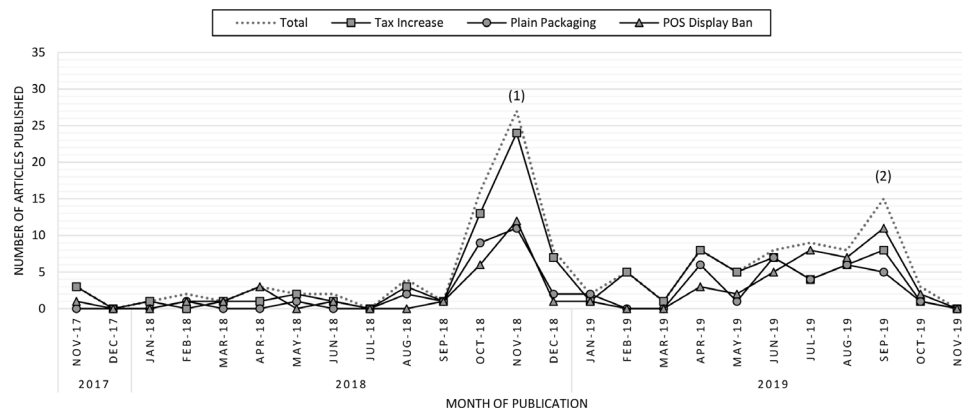


Figure 1 Volume of articles published per month, in total and by policy. (1) Announcement and unveiling of the National Prevention Agreement; (2) debate on the National Prevention Agreement in the house of representatives.

against ‘patronising in the Netherlands’. Whilst the number of industry appearances is near equal across all three policies (tax: 26, plain packaging: 27, POS display ban: 24), the industry appears in a larger proportion of articles concerning plain packaging (46%) and the POS display ban (36%), compared with the tobacco tax increase (25%).

Article tone

Table 2 presents the tone of the articles. Towards tobacco control policies overall the article tone leaned towards neutral (33%), with an equal proportion of articles expressing support (28%) or opposition (28%). The smallest proportion of articles expressed a mixed tone (11%) (**table 2**). On examining whether tone varied based on article length, we found that shorter articles (up to and including 250 words (n=30)) accounted for 22.4% of the total sample, but nearly half of the articles coded as neutral (45.5%). Among short articles, 66.7% had a neutral tone, whilst among longer articles (more than 250 words), only 23.1% had a neutral tone.

Across types of articles, news items were most frequently neutral (41%), editorial items were more often positive (44%) and letters/comments were more often negative (50%). Among articles that expressed an opinion, the policies plain packaging and the POS display ban received more negative coverage than positive, while the tax increase tended to receive more positive coverage than negative. The percentage of neutral coverage for all three policies ranged from 42% to 51%. An example of an article coded as positive included a statement

demonstrating support for the policy such as ‘Effective measures should include substantially increasing the price of cigarettes, drastically reducing smoking areas, also drastically reducing the number of points of sale (no more cigarettes in the supermarket!), and making a pack of cigarettes uninteresting, for example by making the pack completely black without mentioning the brand. Only in this way are steps taken that lead to a reduction in the number of starting smokers.’ [‘Pulmonologists still see pictures of black holes too often’, Trouw, 24/04/2019] while an example of a negatively coded article, written by the director of VSK is ‘This is really worrying: a number of measures have no beneficial effect on public health and, on the other hand, are harmful to the economy and the treasury’ [‘We are throwing a billion euros across the border in no time’, De Telegraaf, 03/07/2019].

When re-examining the tone of the articles where the tobacco industry or its allies were not cited nor authors of the article, a shift in tone is seen from negative to positive for plain packaging and the POS display ban (**table 3**).

Three of the four most circulated newspapers reported most frequently on the three policies. In the most circulated newspaper, *De Telegraaf*, the majority of articles opposed the tobacco control policies (58%). The second and fourth most circulated newspapers, *Algemeen Dagblad* and *De Volkskrant*, had the most negative coverage after *De Telegraaf* (excluding newspapers that published fewer than five articles), however, their coverage was more balanced overall (online supplemental figure 1).

Table 2 Tone of newspaper articles, by topic, 2017–2019 (n=134)

	Tone coded (%)			
	Positive	Negative	Neutral	Mixed
Tax increase	30	18	42	10
Plain packaging	15	27	51	7
Display ban	15	27	50	8
Tobacco control overall	28	28	33	11

Table 3 Tone of newspaper articles not authored by or mentioning the tobacco industry or its allies, by topic, 2017–2019 (n=96)

	Tone coded (%)			
	Positive	Negative	Neutral	Mixed
Tax increase	36	12	48	4
Plain packaging	25	6	69	0
Display ban	21	10	64	5
Tobacco control overall	34	14	44	8

Table 4 Frequency of arguments coded, presented in the policy dystopia model

Discursive strategy	Domain	Argument	Frequency				Total
			Tobacco tax	Plain packaging	POS display ban	Tobacco control overall	
Expanded/created							
Unanticipated costs to economy and society	The economy	Policy will lead to lost sales/jobs/ revenue	3	1	8	2	14
		Policy will lead to lost/unreliable tax revenue	3	–	–	–	3
		Cross-border purchases will increase	6	–	–	3	9
		Proposed policy timeline is too fast	–	–	8	–	8
	Law enforcement	Policy will increase illicit trade	2	1	1	–	4
		Policy will criminalise the public	–	–	–	–	–
	The law	Breach of intellectual property laws	–	–	–	–	–
		Breach of trade agreements	–	–	–	–	–
		Public body acting beyond jurisdiction	–	–	–	–	–
	Politics/Governance	Government is anti-free-enterprise	–	–	–	–	–
		Nanny state/slippery slope	–	1	1	17	19
		Government is unreasonable/unaccountable	1	–	1	3	5
		Policy is just a cash cow for government	1	–	–	–	1
	Social justice	Policy is unfair to smokers	1	–	2	2	5
		Policy is regressive	3	–	1	1	5
		Policy will lead to reduced social cohesion	1	–	4	1	6
There is insufficient public support for policy		1	–	–	–	1	
Unintended benefits to undeserving groups	Smugglers will profit	–	1	–	–	1	
	Big business will profit	–	–	–	–	–	
Unintended costs to public health	Policy will be counterproductive	–	–	1	2	3	
Contained/denied							
Intended public health benefits	There is not (good) enough evidence		1	–	–	2	3
	Policy will not work		2	1	1	1	5
	Policy is not needed		3	4	2	1	10
Expected tobacco industry costs	Policy will lead to reduced sales/jobs		–	–	2	–	2
	Cost of compliance will be high		–	1	5	–	6
	Product quality will be negatively affected		–	1	–	–	1
Total			28	11	37	35	111
New arguments are added to the model and indicated in bold. POS, point of sale.							

Frequency and content of opposing arguments

A total of 111 opposing arguments were coded in 42% of the articles. Once coded, 14 out of 20 arguments from the PDM [7], as well as six additional arguments were identified, resulting in 20 distinct arguments all of which fell within existing domains of the PDM (table 4). Examples of new arguments added to the model can be found in online supplemental table 1. Opposition to the tobacco policies of the prevention agreement as a whole most often consisted of the ‘nanny state/slippery slope’ argument accusing the government of interfering with individuals’ freedoms. This was by far the most used argument across the articles. For tobacco tax, opposing argumentation focused mostly on the policy leading to an increase in cross-border purchases. Few opposing arguments were focused on plain packaging, although the argument that the policy is ‘not needed’ (to achieve intended public health benefits) was the most used. The

most diverse range of arguments were employed against the POS display ban and tax increase (thirteen arguments identified); the two most common being that the policy would lead to lost sales and jobs and that the proposed timeline for implementation was too fast. Five opposing arguments were used universally for all three policies: the policy will lead to lost sales/jobs/revenue, will increase illicit trade, the government is unreasonable/unaccountable, and the policy is not needed or will not work. Arguments presented in the articles authored by the tobacco industry and its allies were predominantly against the policies in general due to concerns of increased illicit trade and cross-border purchases, the patronising of government and the supposed lack of evidence to necessitate such policies.

While the six additional arguments that were coded are not fully accounted for in the PDM, all fall within five of the existing nine domains (table 4). The three

most common of these arguments were that cross-border purchases would increase (unintended costs to economy and society domain), that the proposed policy timeline is too fast for retailers (to diversify stock or implement measures) (economy domain) and that with the disappearance of the neighbourhood corner shop selling tobacco, a key neighbourhood function and source of social cohesion would be lost (in reference to the other amenities that such shops often provide such as postal services) (social justice domain).

DISCUSSION

In this study, we aimed to analyse and compare the coverage and extent of support in Dutch newspapers for the policies of substantial tobacco tax increases, plain packaging and the POS display ban. We also examined the nature of tobacco industry appearances and argumentation presented in articles in opposition to these policies.

The tobacco industry and allied parties authored or were quoted in 28% of all articles. The majority of appearances were made by trade associations for tobacco retail and manufacturing. This is in line with the observation that industry arguments are brought forward by a variety of voices to represent the issue as of concern to different sectors of society, rather than that of tobacco companies alone.²⁵ The use of allied voices not only gives the (appearance of) more weight to the concerns put forward but also more credibility as tobacco companies continue to be seen as untrustworthy and unethical by the general public.^{14 30}

Another key finding was that the majority of coverage was neutral, and for two of the three policies (plain packaging and POS display ban), coverage was more often negative than positive. This contrasts with most previous studies from high-income countries which report predominantly positive portrayals of tobacco control policy overall.^{16 31–36} There are some possible explanations for this difference in these findings. First, these previous studies predominantly focus on other types of policies, from different contexts with regards to the tobacco control landscape, which may account for some of the difference observed. Second, the difference may also be in part due to the inclusion criteria used. In our study, we included any article that mentioned one or more of the three policies, whereas other studies have defined a minimum of text on the topic to warrant inclusion. Our analysis may, therefore, contain a larger proportion of shorter articles that briefly and factually report the planned implementation of these policies, yielding a neutral tone. This is supported by the finding that 66.7% of articles in our study with a word count up to and including 250 words were neutral in tone, while only 23.1% of longer articles included were neutral. These shorter articles accounted for almost half of all neutrally coded articles (45.5%), resulting in 33% of all articles being neutral in tone.

The finding that most of the coverage was neutral may indicate that these policies were newsworthy enough to report on, but not seen as especially novel or controversial by a Dutch audience, potentially supported by the fact that there was relatively little coverage in the period studied compared with other newspaper content analyses over a similar and shorter lengths of time.^{16 18 37} The finding that the presence of the tobacco industry and its allies were able to shift the tone of coverage from positive to negative, despite appearing in only 28% of articles, demonstrates the power the industry and allied voices have to alter how policies are portrayed. Without these articles, however, there were more supportive articles about the policies than opposing—a positive sign perhaps for future policy and support for the Dutch government's 2040 goal. However, the general public is potentially exposed to all of these articles, potentially leading to the perception that negative views on tobacco control are held more broadly. Our analysis of the volume of coverage over time suggests that the announcement and political discussion of tobacco policy appears to be a window of opportunity for advocates to voice their support for the policies and refute the claims made by the tobacco industry and its allies. In addition, further work to denormalise and discredit the tobacco industry and its allies through, for instance, mass media campaigns could work to make readers more critical of what is presented in the media and by whom.

In our analysis, we found the 'nanny state/slippery slope' argument to be the most frequently used against the policies overall, echoing findings from the USA in an analysis of news coverage of smoke-free policies.¹⁶ This argument can be seen as a particularly potent argument in the Netherlands, as the conservative-liberal ruling political party propagates the position that smoking is the free choice of adults.¹⁴ Other countries with comparable ruling political ideology may wish to take note that this argument was frequently used and could be applied to most if not all tobacco policies, providing some predictability in the argumentation strategy of the industry. Messaging to counteract this argument may focus on the fact that most people start smoking when they are young and then become addicted to tobacco; and that tobacco use is thus not a free choice at all.

The negative impact on sales and jobs was also frequently used as an argument—often brought forward by small-to-medium business owners. This is in line with other studies reporting that industry opposition place an emphasis on negative consequences for businesses.^{7 16 31 36} Argumentation against the tax increase focused on the economic consequences. The argument of increased cross-border purchases may be more relevant to mainland Europe, given the ease of travel to neighbouring countries. Arguments opposing the POS display ban focused on the negative consequences faced by tobacco retailers. Opposing arguments to plain packaging were sparse, although 'the policy is not needed' argument was the most used. This is most likely due to the initial plans

to implement plain packaging and the POS display ban simultaneously, where the purpose of plain packaging for hidden products was questioned. These arguments may resurface with the introduction of a tobacco sales ban in supermarkets, planned for 2024, as this policy has the potential to impact tobacco retailers.³⁸

Overall, the argumentation used was consistent with the PDM and new arguments largely aligned with the discursive strategies and domains already laid out in the model, suggesting that it remains a suitable model for anticipating tobacco industry argumentation. We expanded on the PDM by incorporating new arguments reflecting specific local and current circumstances, such as the claim that cross-border purchases will increase (separate from illicit trade) as neighbouring countries sell cheaper products. This updated PDM with new arguments demonstrates how the industry continues to exaggerate policy costs, claiming for instance that the policies will lead to an excise loss of a billion euros. This information can be used by tobacco control advocates and policy makers to better understand and pre-empt the argumentation these policies may face in similar contexts.

Strengths of this study include the analysis of the frequency of arguments used against the policies. This way, we were able to systematically assess the prominence of opposing arguments in the context of tobacco tax, plain packaging and the POS display ban in newspapers in the Netherlands and demonstrate which arguments were most used in this case. Another strength is that we assessed the portrayal of several policies which enabled us to compare coverage within the same cultural, geographical and political context.

This study is not without limitations. First, while this analysis includes both print and online versions of national newspaper articles, it was not feasible for us to include other electronic or social media. As such, newspaper articles were analysed as a proxy for media coverage more generally. Previous research has found that tobacco companies nowadays most frequently communicate via social media to oppose policy and so the inclusion of social media in this analysis may have skewed the coverage in a negative direction. Second, initial analysis of opposing arguments yielded poor agreement between researchers. To mitigate this, all arguments were double-coded and our final updated PDM framework was checked by a coauthor of the original PDM.

This study provides an expansion of the PDM to include six new arguments that oppose tobacco control policy. This study also furthers our understanding of how tobacco tax increases, plain packaging and the POS display ban are portrayed by the media and the tobacco industry in mainland Europe.

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Contributors NLP, BvS and GEN contributed to the conception and design of the study. NLP prepared the manuscript and collected and prepared the data for analysis. NLP and BvS analysed and interpreted the data. BvS, FvdB, AG, MCW and GEN provided expertise and reviewed drafts of the manuscript. All authors read and approved the final manuscript. NLP is responsible for the overall content as the guarantor.

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