



Moodie, C., Sinclair, L., Mackintosh, A. M., Power, E., and Bauld, L. (2016) How tobacco companies are perceived within the United Kingdom: an online panel. *Nicotine and Tobacco Research*, 18(8), pp. 1766-1772.

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Title: How tobacco companies are perceived within the UK: An online panel

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How tobacco companies are perceived within the UK: An online panel

Abstract

Introduction: Little is known about how consumers perceive tobacco companies in the United Kingdom.

Methods: An online cross-sectional survey with those aged 16 years and over (N=2,253) explored perceptions of, and attitudes towards, tobacco companies. This included awareness of tobacco companies, views on tobacco companies' practices (targeting the most vulnerable, encouraging smoking to replace those who quit or die, making cigarettes more addictive) and values (honesty, ethics, interest in harm reduction), perceptions of regulation of tobacco companies (whether tobacco companies have the same marketing rights as other companies, should be allowed to promote cigarettes, be required to sell cigarettes in plain packs, and pay for associated health costs), and locus of responsibility for health problems caused by tobacco use.

Results: Prompted awareness of tobacco companies was high (68%). Almost a third of the sample had a negative perception of tobacco companies' practices, e.g. they thought they made cigarettes more addictive. In terms of tobacco companies' values, less than a fifth considered tobacco companies honest, ethical, and interested in reducing the harm caused by cigarettes. Indeed, tobacco company executives were rated lower than the seven other professions asked about, except car salesman, in terms of ethics and honesty. More than half the sample supported greater regulation, e.g. requiring tobacco companies to pay for health costs due to tobacco use. Most attributed responsibility for smoking-related health problems to smokers (88%) and tobacco companies (55%).

Conclusions: The findings suggest that consumers are not fully informed about tobacco company practices.

Implications

Few studies outside of North America have explored perceptions of tobacco companies' practices, values and regulation and responsibility for smoking-related illness. Adults surveyed within the United Kingdom considered tobacco companies dishonest, unethical and untrustworthy, but only a third of the sample thought that they encourage new smokers or have made cigarettes more addictive, and just over a half attributed most of the responsibility for smoking-related health problems to tobacco companies. As consumers do not appear fully informed about the role of tobacco companies in initiating and perpetuating the tobacco epidemic, tobacco industry denormalisation campaigns may be of potential value.

Introduction

Globally, tobacco remains a leading cause of premature death, with at least 80% of lung cancer deaths, the most common cause of cancer death, attributable to smoking.^{1,2} In response to the harms associated with tobacco use, most countries are now signatories to, and indeed have ratified, the Framework Convention on Tobacco Control (FCTC), which requires Parties to implement a raft of demand reduction and supply control measures aimed at reducing tobacco use.³ The latest World Health Organisation report on the implementation of the FCTC indicates that approximately four-fifths of Parties to have ratified the FCTC have adopted or strengthened tobacco control legislation since doing so.⁴ The most frequently implemented articles concern protection from exposure to tobacco smoke, sales to minors, packaging and labelling, advertising and promotion, price and tax measures, illicit trade, and regulation of tobacco product disclosures and contents.⁴

Another article that has been frequently implemented, Article 12, involves educating consumers about tobacco harms.³ The guidelines for Article 12 note that this can include informing the public about the role of the tobacco industry as a disease vector in initiating and perpetuating the tobacco epidemic.⁵ This approach is known as tobacco industry denormalisation (TID), with the basic underpinning premise being that increasing awareness about tobacco industry practices will change consumer attitudes towards smoking and, in turn, alter their smoking behaviour or prevent initiation.⁶ There is some evidence that TID is linked with reductions in smoking prevalence and initiation and increased quit intentions.⁷ There remains a reluctance however to include TID within tobacco control in most countries, possibly due to a lack of political will, fear of litigation or a dearth of country-specific research.⁸ To inform a TID campaign, and indeed give some indication as to whether this may be of value, an important starting point is to gauge public awareness of tobacco

companies and perceptions of their practices and values, as well as level of support for further regulation of tobacco companies.

A review of the TID literature in 2010 identified only fifteen studies exploring attitudes towards tobacco companies, with all but one conducted in the US, Canada, Australia and New Zealand.⁷ A study in Russia in 2007 found that on one hand the tobacco industry was perceived by only 3.5% of adults as unethical, while on the other only 10.1% believed that they did not bribe politicians and officials. With respect to these seemingly divergent findings, the authors note that due to Russia's poor performance on corruption indexes it may be that consumers do not view the tobacco industry as any more unethical than other industries, with bribery perceived as commonplace in all.⁹ Another study, an ITC-Four country survey in 2002/3, which included adult smokers in the UK, as well as from the US, Canada and Australia, found that most perceived tobacco companies negatively. For instance, more than three-quarters reported that tobacco companies cannot be trusted to tell the truth, and those intending to quit were more likely to report medium or high negative beliefs about tobacco companies.⁸ Interestingly, smokers in the UK were more likely than smokers in the other three countries to agree that tobacco companies can be trusted to tell the truth, and less likely to agree that they are responsible for smoking harms or deceive the public.⁸

Another ITC-Four country survey in 2004, not included within the review, found that although a greater percentage of adult smokers in the UK agreed that tobacco products should be more tightly regulated than did adult smokers in the US, Canada or Australia, a lower percentage than in Canada or Australia agreed that tobacco companies should take responsibility for the harms caused.¹⁰ The less negative perception of tobacco companies among smokers in the UK in these studies may be due to the prevailing view in this country that the responsibility of the associated harms of smoking lies with the smoker¹¹ and/or the absence of TID campaigns or messages. Since these studies were conducted however, the

tobacco landscape has changed significantly in the UK, with smoking banned in public places, tobacco advertising, promotion and sponsorship prohibited, and the introduction of pictorial health warnings on tobacco packaging. In addition, when this study was conducted in 2014, the open display of tobacco products at the point-of-sale had been banned in supermarkets, and the government had twice held public consultations on plain tobacco packaging. Whether these changes have altered public perceptions of the locus of responsibility for tobacco harms, tobacco companies, and support for regulation of tobacco companies, is not clear.

In this study we explored awareness of tobacco companies, which has generally been overlooked in past research, and perceptions of tobacco companies' practices (e.g. making cigarettes more addictive) and values (e.g. honesty and ethics), support for regulation of tobacco companies (e.g. requiring tobacco companies to sell cigarettes in plain packs) and also responsibility for the harms caused by tobacco use.

Methods

Design

An online survey in the UK in August 2014 explored awareness and perceptions of tobacco companies. The survey was undertaken by YouGov using a sample of adults (aged 16 years and older) recruited from a panel of over 400,000 people. Panel members are recruited from various sources, including advertising and partnerships with other websites. Members have no obligation to participate in surveys, but are restricted in how often they can be surveyed in an attempt to avoid 'professional' participants, i.e. survey-takers who seek out large numbers of surveys for the incentives offered.¹² Participants in YouGov surveys receive a very modest incentive, as is common for online panels.¹³ The School of Management Ethics Committee at

the University of Stirling deemed that ethical approval was not required as panel members had already agreed to be contacted by YouGov to participate in surveys. While this particular survey was not of a sensitive nature, and the sample was aged 16 or over, explicit consent was required from participants before they could take part. The survey was carried out according to the Market Research Society Code of Conduct.

Sample

The sample comprised 2,253 adults drawn from the YouGov online panel. Randomly selected panel members, aged 16 and over, were invited by e-mail to participate in the survey, with a link provided to do so. A boosted sample of 16-24 year olds was included, adding a further 225 potential participants, to ensure robust coverage of this key age group. As smoking rates are high in this age group they are a priority for efforts to reduce prevalence. Response rate details are not available as recording contact, participation and refusal rates is impractical when using this sampling methodology. The responding sample was weighted, using census data, to ensure representation of the adult population of the UK.

Measures

General information

Age, gender, social grade (occupation of chief income earner within household) and region of UK were obtained.

Smoking and vaping status of participants and close friends

Participants' smoking status was obtained by asking 'Which of the following statements best applies to you', with response options: 'I have never smoked', 'I used to smoke but I have given up now', 'I smoke but I don't smoke every day', and 'I smoke every day'. Those who

answered 'never smoked' or 'used to smoke' were categorised as non-smokers with the remaining two answer options denoting smokers. The same question was asked about e-cigarette use, with response options: 'I have never heard of e-cigarettes and have never tried them', 'I have heard of e-cigarettes but have never tried them', 'I have tried e-cigarettes but do not use them (anymore)', 'I have tried e-cigarettes and still use them every day', 'I have tried e-cigarettes and still use them, but not every day', and 'Don't know'. Those who answered either of the first two options were categorised as having 'never tried' e-cigarettes with those selecting any of the next three answer options categorised as having 'tried' e-cigarettes. Smoking status and e-cigarette usage of close friends was obtained by asking 'Of the five people that you spend most time with on a regular basis (outside of work), how many of them a) smoke cigarettes (not including e-cigarettes), and b) use e-cigarettes'.

Awareness of tobacco companies

This was measured by two items. First, participants were asked 'Please list below the names of any tobacco companies you can think of?' Second, they were provided with a list of companies (China National Tobacco Corporation, British American Tobacco, Japan Tobacco International, Imperial Tobacco, Philip Morris Ltd, Altria Group) and asked 'Which of the following companies have you heard of?'

Perceptions of tobacco companies' practices

Participants were asked how much they agree or disagree with the following three statements:

a) 'Tobacco companies have made cigarettes more addictive by changing their ingredients and design', b) 'Tobacco companies encourage people to become smokers to replace those who give up or die', and c) 'Tobacco companies encourage people to become smokers by targeting those who are most vulnerable'. Responses were provided on five-point semantic

scales (1=Strongly disagree to 5=Strongly agree), with a 'Don't know' option available.

These three items comprised the '*Practices*' scale.

Perceptions of tobacco companies' values

Participants were asked how much they agree or disagree with the following three statements:

d) 'Tobacco companies can be trusted to tell the truth', e) 'Tobacco companies behave ethically towards consumers', and f) 'Tobacco companies are interested in reducing the harm caused by cigarettes'. Responses were provided on a five-point scale (1='Strongly disagree' to 5='Strongly agree'), with a 'Don't know' option available. These three items comprised the '*Values*' scale.

To further explore values, an additional item asked participants to rate people in different professions (Nurses, Doctors, School teachers, Lawyers, Journalists, Bankers, Car salesman, Tobacco company executives) on honesty and ethics: 'Please look at the following list of occupations. How would you rate people in these professions in terms of their standards of honesty and ethics?' Responses were provided on five-point semantic scales (1=Very low to 5=Very high), with a 'Don't know' option available.

Attitudes towards regulation

One item asked 'In general, do you think there is too much, too little, or the right amount of government regulation of the tobacco industry' with response options 'Too much', 'The right amount', 'Too little', and 'Don't know'.

A further four items asked participants how much they agree or disagree with the following four statements: g) 'Tobacco companies should have the same right to market their products as other companies', h) 'Tobacco companies should not be allowed to promote cigarettes at all, but just make them available to adults who want to smoke them', i) 'Tobacco

companies should pay for the health related costs associated with tobacco use', and j) 'Tobacco companies should be required to sell cigarettes in plain packs - that is, packs that all look the same except for brand names'. Responses were provided on a 5-point scale (1=Strongly disagree to 5=Strongly agree), with a 'Don't know' option available. These four items comprised the '*Regulation*' scale.

Responsibility for smoking related harms

Three items assessed the degree of responsibility attributed to smokers, the government and tobacco companies for smokers' health problems: 'How much, if at all, do you think each of the following (Smokers, Government, Tobacco companies) are responsible for the health problems smokers may have because of their smoking'. Response options were 'Completely responsible', 'Mostly responsible', 'Somewhat responsible', and 'Not at all responsible'.

Statistical Analysis

Data were analysed using SPSS Version 21. Descriptive data were weighted for age, gender, social grade, region, newspaper readership and political party affiliation to be representative of the UK population. Four items (d-g) within the *Values* and *Regulation* scales were reverse coded so that a higher score was indicative of a more negative perception of tobacco companies or greater support for regulation. A principal components analysis was conducted to derive three composite measures assessing *Practices* (Cronbach's $\alpha = 0.87$), *Values* (Cronbach's $\alpha = 0.76$) and *Regulation* (Cronbach's $\alpha = 0.74$) all of which had good internal validity. Principal components were extracted using varimax rotation with the criteria of eigenvalues greater than 1, consideration of the scree plot and component loadings >0.59 .

Composite scores for each measure were then derived by combining the individual item ratings, with potential scores ranging from 3-15 for *Practices* and *Values* and 4-20 for

Regulation. These scores were then recoded into binary variables to enable a comparison of those who had more negative perceptions of tobacco companies, or greater support for regulation, with those who did not. The mid-point of each potential scale was selected as the binary cut-off thus a score of 10 or above for *Practices* and *Values*, and a score of 13 or above for *Regulation*, was considered reflective of negative perceptions of tobacco companies and support for regulation. All individual items within each measure were also converted to binary variables to categorise those who perceived tobacco companies negatively, or supported greater regulation (codes 4-5) and those who did not (codes 1-3). Those not answering, or selecting the 'Don't know' option to any of these items, were recoded to 'Neither agree nor disagree' (code 3).

Associations between demographic and smoking related items, and a) perceptions of tobacco companies' *Practices* and *Values*, and b) attitudes towards *Regulation*, were examined using logistic regression on unweighted data. This enabled the influence of each demographic and smoking related item on each measure to be assessed whilst accounting for the influence of all demographic and smoking related items.

Chi-square tests were used to examine differences, by smoking status, in the proportions who attributed responsibility for smokers' health problems to smokers, the government and tobacco companies.

Results

The demographic characteristics of participants are shown in Table 1. The sample was selected to be representative of the population with oversampling of 16-24 year olds. Approximately one in five participants (19.2%) was a current smoker and 5.7% currently used e-cigarettes.

Awareness of tobacco companies

Only a quarter could spontaneously recall a tobacco company, although two-thirds (68%) were aware of one or more companies when prompted. When prompted, more than half reported awareness of Imperial Tobacco (54%), two-fifths British American Tobacco (42%), a third Philip Morris (31%) and only 2% Japan Tobacco (Figure 1).

Perception of tobacco companies' practices

Approximately a third agreed that tobacco companies target the most vulnerable (35%) and encourage people to become smokers to replace those who give up or die (34%), see Table 2. Slightly fewer (28%) believed that companies have made cigarettes more addictive by changing ingredients and design. The mean score for the composite *Practices* measure, which ranged from 3 to 15 (with a higher score indicating a more negative perception), was 9.6 (SD 3.1). Approximately a third of participants (32%) held an overall negative perception of tobacco companies' practices (i.e. scored 10 or more on the composite measure). Logistic regression found that the likelihood of holding an overall negative perception of tobacco companies' practices was lower among females (AOR 0.70, 95% CI 0.58 to 0.84, $p < 0.001$), smokers (AOR 0.59, 95% CI 0.44 to 0.79, $P < 0.001$) and those aged 45-54 (AOR 0.66, 95% CI 0.48 to 0.91, $p = 0.011$, compared with those aged 16-24), shown in Supplementary Table 1.

Perception of tobacco companies' values

Less than a fifth (17%) considered tobacco companies to be interested in harm reduction, with 9% believing that they behave ethically and 6% that they can be trusted to tell the truth (Table 2). In terms of being rated highly or very highly for their honesty and ethics, tobacco company executives were rated second lowest (4%) when compared with other professionals:

Nurses (73%), Doctors (72%), School teachers (61%), Lawyers (24%), Journalists (5%), Bankers (5%) and Car Salesmen (2%).

The mean score for the *Values* scale, which ranged from 3 to 15 (with a higher score indicating a more negative perception), was 10.9 (SD 2.4). More than half (56%) held an overall negative perception of tobacco companies' values (i.e. scored less than 9 on the composite measure). Logistic regression found that females (AOR 0.72, 95% CI 0.61 to 0.86, $p < 0.001$), and smokers (AOR 0.59, 95% CI 0.46 to 0.76, $P < 0.001$) were less likely to hold a negative view of tobacco companies' values (Supplementary Table 1).

Support for regulation

Two-fifths (39%) believed that there is too little regulation of the tobacco industry. Three-fifths (59%) agreed that tobacco companies should not be allowed to promote cigarettes at all, but just make them available to adult smokers, and 46% disagreed that tobacco companies should have the same right to market their products as other companies (Table 2). Almost half (46%) agreed that these companies should pay for health costs and be required to sell cigarettes in plain packs (49%).

The mean score for the *Regulation* scale, which ranged from 4 to 20 (with a higher score indicating greater support for regulation), was 13.7 (SD 3.6). More than half (56%) supported greater regulation of tobacco companies (i.e. scored 13 or more on the composite measure). Logistic regression analyses found that smokers (AOR 0.43, 95% CI 0.33 to 0.55, $P < 0.001$) and those who had tried e-cigarettes (AOR 0.70, 95% CI 0.54 to 0.93, $P = 0.012$) were less likely to be supportive of more regulation while participants in Scotland were more likely to be supportive of regulation than participants in England (AOR 1.57, 95% CI 1.12 to 2.20, $P = 0.008$) (Supplementary Table 1).

Responsibility for smoking related harm

Most participants considered smokers (88%) and tobacco companies (55%) completely or mostly responsible for smoking-related health problems, with 21% considering the government completely or mostly responsible. Smokers were less likely than non-smokers to attribute complete or most responsibility to smokers (84% v 90%, $p=0.001$) or to tobacco companies (46% v 57%, $p<0.001$).

Discussion

Past work in North America has examined public perceptions of the tobacco industry and employed these to inform campaigns to challenge the tactics they use to encourage consumers, particularly younger people, to use tobacco products. However, this type of research has seldom been conducted elsewhere, including the United Kingdom. This survey begins to address that gap by exploring how citizens view tobacco companies and their practices.

Spontaneous awareness of tobacco companies was low, although two-thirds of participants were aware of at least one company when prompted. Interestingly, prompted awareness was highest for Imperial Tobacco (54%) but lowest for Japan Tobacco (2%), even though these two companies dominate the UK tobacco market. While the Gallaher Group, which Japan Tobacco acquired in 2007, may have been a more familiar company name to some participants, the low level of prompted awareness is nevertheless surprising given that almost half the sample were smokers or ex-smokers and Japan Tobacco have 39% share of the UK market.

More than half the sample supported greater regulation, e.g. requiring tobacco companies to pay for health costs due to tobacco use, and also plain packaging. That two-thirds were aware of at least one leading tobacco company may be due, in part, to their

vigorous opposition of plain packaging in the UK. While it was pro-smoking and neoliberal front groups publicly opposing plain packaging, rather than tobacco company spokespeople, which is a well-established tobacco industry practice to avoid dealing with its lack of public credibility,^{14,15} litigation by tobacco companies and media coverage of this may have brought tobacco companies more into the public consciousness. While the use of front groups may help create doubt and controversy,¹⁶ it has been argued that groups showing disaffection should be asked about their sponsors¹⁷ and that media investigation of sponsors has frequently limited the effectiveness of front groups.¹⁸ While past TID campaigns have successfully used messages about tobacco industry manipulation and marketing practices, novel messages are periodically required,⁶ with information about the use of front groups within the tobacco industry one possibility.

Consistent with past research, with diverse samples, tobacco companies were regarded as dishonest and unethical, and less trustworthy than other companies.⁷ This may explain why only one in six of our sample thought that they were interested in reducing harm. Past research with youth found that an even lower proportion, only one in ten, would believe it if a tobacco company said they had made a safer cigarette.¹⁹ The fundamental problem for tobacco companies is that they are corporate entities that profit from selling products, mainly cigarettes, which have no safe level of consumption.^{20,21} As the longstanding promise of a safer cigarette never materialised it is difficult for tobacco companies to gain credibility when it comes to harm reduction, particularly given their poor corporate reputation, which has not been helped by the allegations of bribery made against a leading tobacco firm at the end of 2015²², and consumer mistrust, as found in this study. However, investment in companies manufacturing lower risk nicotine products such as e-cigarettes may provide them with the opportunity to harness public debates and understanding (or lack of) harm reduction. Future

research could explore the impact, if any, that tobacco companies' involvement in this new nicotine market has on how they are perceived.

While the prevailing view was that tobacco companies are dishonest, unethical and untrustworthy, only a third agreed that they target the vulnerable and encourage new smokers to replace those who quit or die, and only 28% believed they have made cigarettes more addictive. Almost three-quarters of a century ago, it was pointed out that little is known about how tobacco companies products are manufactured.²³ It is now known that cigarettes are highly engineered to create and maintain dependence.³ As part of litigation in the US, tobacco companies were ordered to issue five 'corrective statements' about past deceptive strategies, including manipulating cigarette design to increase addictiveness, which were set to appear in various media (TV, radio, print, online, retail points of sale for tobacco and cigarette pack inserts) in 2014 but have been delayed pending an appeal from tobacco companies. Nevertheless, an online study with adult smokers exploring their response to these corrective statements found that the message explaining that tobacco companies intentionally designed cigarettes to make them more addictive elicited the highest score of any of the five messages in terms of anger towards the tobacco industry, and the third highest score in terms of motivation to quit.¹³ That almost three-quarters of our sample disagreed or did not know that tobacco companies have made cigarettes more addictive suggests that this may be an appropriate TID message, particularly for smokers, who were more positive than non-smokers about tobacco companies' practices and values..

In terms of limitations, we employed survey research, which is the most common approach used to assess tobacco industry attitude,⁷ but our online panel may not be representative. In addition, disparities in internet access, and the fact that we are unable to determine the response rate, may have skewed our sample. While our primary focus was to provide an insight into the public perception of tobacco companies, we did not explore the

reasons behind participants' responses. This would be a fruitful area of future research. We could also have assessed a wider range of possible tobacco control measures, including more radical end-game measures such as a complete ban on sales of cigarettes providing effective nicotine substitutes were available.^{24,25}

Perhaps unsurprisingly, given the longstanding focus on individual responsibility in the UK,²⁶ the vast majority of the sample attributed most of the responsibility for smoking-related health problems to smokers. However, only about half considered tobacco companies, who supply such products in the first instance, mostly responsible. It is unclear whether the blame attributed to smokers would still be as high in the UK if the public were fully aware that tobacco companies have misinformed the public for decades.²⁷ TID, which seeks to raise awareness about tobacco companies role in tobacco-related disease and the deceptive strategies and practices they have employed,⁵ would be one means of exploring this.

Funding

Funding was provided by Cancer Research UK.

Declaration of interests

EP, who conducted a background review of the literature, works for Cancer Research UK, which funded this study. The remaining authors have no interests to declare.

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Table 1: Sample characteristics: Gender, age, social grade, government region, smoking status, e-cigarette use, smokers and e-cigarette users in close circle

Characteristic	Values	Unweighted		Weighted	
		No.	%	No.	%
Gender	M	1045	46.4%	1106	49.1%
	F	1208	53.6%	1147	50.9%
Age	16-24	553	24.5%	336	14.9%
	25-34	355	15.8%	320	14.2%
	35-44	368	16.3%	465	20.6%
	45-54	307	13.6%	506	22.4%
	54-64	358	15.9%	330	14.6%
	65+	312	13.8%	297	13.2%
Social grade	ABC1	1090	48.4%	1136	50.4%
	C2DE	1163	51.6%	1117	49.6%
UK Country	England	1887	83.8%	1890	83.8%
	Wales	108	4.8%	110	4.9%
	Scotland	181	8.0%	192	8.5%
	Northern Ireland	77	3.4%	62	2.8%
Smoking status	Never smoker	1179	52.3%	1107	49.1%
	Ex-smoker	662	29.4%	714	31.7%

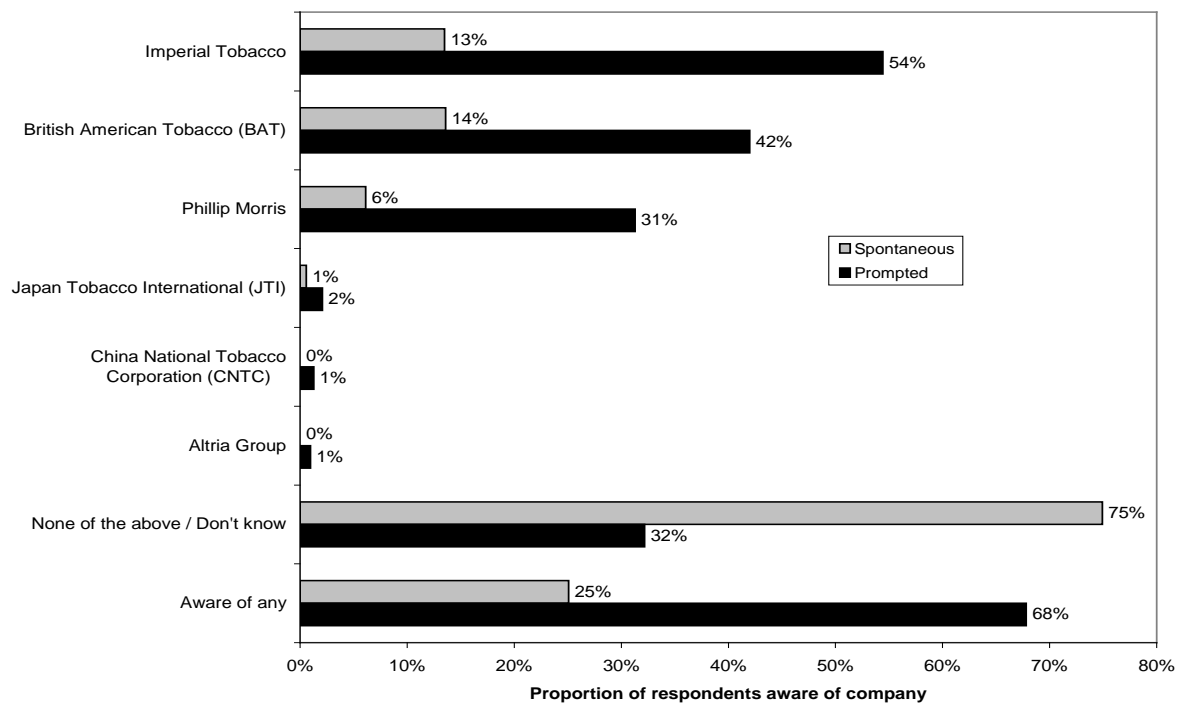
	Smoker	412	18.3%	432	19.2%
E-cigarette use	Non-user	2057	91.3%	2059	91.4%
	User	120	5.3%	128	5.7%
	Unknown	76	3.4%	66	2.9%
No. smokers in close circle	None	1062	47.1%	1059	47.0%
	1-2	740	32.8%	749	33.2%
	3-5	334	14.8%	343	15.2%
	Unknown	117	5.2%	102	4.5%
No. e-cigarette users in close circle	None	1528	67.8%	1555	69.0%
	1-2	463	20.6%	449	19.9%
	3-5	101	4.5%	104	4.6%
	Unknown	161	7.1%	145	6.4%

Table 2: Responses to individual items comprising the *Practices, Values, and Regulation* scales and items relating to *Responsibility for smoking related harms*

Tobacco companies ...	Agree		Disagree	
	No.	%	No.	%
<i>Practices</i>				
a) have made cigarettes more addictive by changing their ingredients and design	635	28	417	19
b) encourage people to become smokers to replace those who give up or die	756	34	608	27
c) encourage people to become smokers by targeting those who are most vulnerable	791	35	597	27
<i>Values</i>				
d) can be trusted to tell the truth	136	6	1319	59
e) behave ethically towards consumers	196	9	1050	47
f) are interested in reducing the harm caused by cigarettes	384	17	998	44
<i>Regulation</i>				
g) should have the same right to market their products as other companies	603	27	1037	46
h) should not be allowed to promote cigarettes at all, but just make them available to adults who want to smoke them	1333	59	361	16
i) should pay for the health related costs associated with tobacco use	1032	46	602	27
j) TCs should be required to sell cigarettes in plain packs	1095	49	530	24
<i>Responsibility for smoking related harms</i>				

How much, if at all, do you think each of the following are responsible for the health problems smokers may have because of their smoking?	Completely /mostly		Somewhat / not at all	
	No.	%	No.	%
	Smokers	1991	88	262
The government	479	21	1774	79
Tobacco companies	1245	55	1008	45

Figure 1: Spontaneous and prompted awareness of tobacco companies



Supplementary Table 1: Logistic regression of association between perception of tobacco companies' *practices, values* and *regulation* and participant's demographic characteristics, their smoking and vaping status, and the smoking and vaping status of their close friends

Variables		<i>Practices</i> (1=Negative perception, 0=Not a negative perception)				<i>Values</i> (1=Negative perception 0=Not a negative perception)				<i>Regulation</i> (1=Supportive attitude, 0=Non supportive attitude)			
		95% CI				95% CI				95% CI			
Independent variables:	n=2253	AOR*	Lower	Upper	p Value	AOR*	Lower	Upper	p Value	AOR*	Lower	Upper	p Value
Smoking status													
Non-smoker	1841	1.00				1.00				1.00			
Smoker	412	0.59	0.44	0.79	<0.001	0.59	0.46	0.76	<0.001	0.43	0.33	0.55	<0.001
Age													
16-24	553	1.00			0.085	1.00			0.548	1.00			0.209
25-34	355	0.88	0.66	1.19	0.411	0.90	0.68	1.20	0.467	1.06	0.79	1.41	0.703
35-44	368	0.99	0.74	1.32	0.940	0.92	0.69	1.22	0.557	1.15	0.86	1.54	0.341
45-54	307	0.66	0.48	0.91	0.011	0.83	0.62	1.11	0.207	0.77	0.57	1.04	0.094
55-64	358	0.74	0.55	1.00	0.053	0.80	0.60	1.06	0.113	0.94	0.71	1.26	0.685
65+	312	0.89	0.65	1.22	0.473	0.79	0.58	1.06	0.115	1.08	0.80	1.46	0.627
Gender													
Male	1045	1.00				1.00				1.00			

Female	1208	0.70	0.58	0.84	<0.001	0.72	0.61	0.86	<0.001	0.96	0.80	1.14	0.613
Social Grade													
C2DE	1090	1.00				1.00				1.00			
ABC1	1163	0.95	0.78	1.16	0.625	1.04	0.87	1.25	0.643	0.99	0.82	1.19	0.899
Country													
England	1887	1.00			0.591	1.00			0.539	1.00			0.02
Wales	108	1.19	0.79	1.80	0.407	1.23	0.82	1.80	0.325	1.48	0.97	2.26	0.067
Scotland	181	1.17	0.84	1.62	0.348	1.20	0.87	1.65	0.268	1.57	1.12	2.20	0.008
Northern Ireland	77	1.21	0.74	1.97	0.446	1.11	0.69	1.78	0.668	0.63	0.39	1.01	0.054
Smokers in close circle													
None	1062	1.00			0.119	1.00			0.116	1.00			0.004
At least one	1074	0.90	0.73	1.11	0.321	1.06	0.87	1.30	0.537	0.83	0.68	1.02	0.074
Unknown	117	0.54	0.29	1.00	0.050	0.62	0.37	1.04	0.071	0.43	0.25	0.73	0.002
E-cigarette users in close circle													
None	1528	1.00			0.694	1.00			0.041	1.00			0.432
At least one	564	1.02	0.81	1.29	0.859	0.81	0.65	1.00	0.050	0.87	0.70	1.09	0.232
Unknown	161	0.82	0.49	1.34	0.422	0.66	0.42	1.02	0.061	0.86	0.54	1.35	0.502
Tried e-cigarettes													
Never tried	1828	1.00			0.018	1.00			<0.001	1.00			<0.001

Ever tried	349	0.89	0.66	1.20	0.450	0.87	0.67	1.14	0.317	0.70	0.54	0.93	0.012			
Don't know	76	0.37	0.18	0.74	0.006	0.25	0.14	0.46	<0.001	0.20	0.11	0.37	<0.001			
Model summary		Test of model coefficients				Nagelkerke R	Test of model coefficients				Nagelkerke R	Test of model coefficients				Nagelkerke R
		χ^2	df	P Value		χ^2	df	P Value		χ^2	df	P Value				
		75.559	17	<0.001	0.046	107.606	17	<0.001	0.062	191.91	17	<0.001	0.110			

* AOR – Adjusted Odds Ratio