Demarketing tobacco through governmental policies – The 4Ps revisited

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Abstract

Governments in many developed countries are increasing their efforts to reduce smoking. In line with their commitment for action, governments use anti-smoking advertising to highlight the health risks of smoking and regulatory measures to dissuade consumers from consuming tobacco. In the past, governments tended to take these steps in isolation, now they are more likely to combine these strategies as part of a demarketing mix. However, relatively little is known about the differential impact of these demarketing mix elements in relation to consumers’ intention to quit smoking and other important outcome variables. This article presents a conceptual model linking the 4Ps in a demarketing context with three outcome measures: consumers’ attitude toward the tobacco industry, consumers’ attitude toward smoking, and consumers’ intention to quit smoking. The authors use empirical longitudinal data to test the model and the results suggest that the four demarketing mix elements affect smokers’ attitudes toward the tobacco industry and smoking, as well as their intention to quit over time. Further, the results from structural equation modeling analysis indicate that not all four demarketing mix elements are equally effective in inducing consumer behavior change.

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1. Introduction

Governments try to solve social problems through public policy initiatives that advocate one behavior over another. One such social problem is smoking, which is annually responsible for approximately 440,000 deaths in the United States (Centers for Disease Control and Prevention, 2002), and 4.8 million deaths worldwide (Ezzati and Lopez, 2003). Consumption of tobacco should be of great concern to consumers, governments and society at large, necessitating a rallying call for anti-consumption against tobacco.

Anti-consumption is in essence against consumption and can manifest through many different actions that are normally directed at products or producers. Reasons such as profit, politics, morals and environmental sustainability may motivate anti-consumption activities (Craig-Lees, 2006; Lee et al., in press). Most anti-consumption movements originate at the consumer level, due to the frustration of an unequal balance of
power between consumer groups and powerful national and multi-national organizations. The anti-consumption movement regarding tobacco is different; in the last four decades, governments have been targeting the tobacco industry in a concerted demarketing drive (Moore, 2005). A recent global approach to concentrate efforts in demarketing tobacco resulted in the formation of the Framework Convention on Tobacco Control (FCTC: WHO, 2003) in 2003, under the auspices of the World Health Organization (WHO). To date, 168 countries have signed the FCTC treaty with 131 of these ratifying the treaty within their countries. In response, the tobacco industry in combating governmental demarketing spent $12.5 billion through advertising and promotions in the U.S. during 2002 (U.S. Federal Trade Commission, 2006), often targeting vulnerable groups such as youths and the marginally educated (Wigand, 2004). This article focuses on nation level demarketing of tobacco as an anti-consumption strategy against such high levels of marketing efforts by the tobacco industry.

Kotler and Levy (1971, p. 75) define demarketing as “that aspect of marketing that deals with discouraging customers in general or a certain class of customers in particular on either a temporary or permanent basis”. Kotler and Levy (1971) suggest that firms need to selectively demarket their products to deal with temporary shortages and excess demand as well as to reduce demand from “undesirable segments” (p. 78). Their focus is thus on how firms choose the optimal marketing mix (product, price, place, and promotion) to manage their long-term relationship with their preferred customers. From a similar perspective, Cullwick (1975) also stressed the strategic role of the marketing mix elements in demarketing (see also Gerstner et al., 1993; Lawther et al., 1997). In contrast, demarketing tobacco through governmental interventions is concerned with an external agency (government) reducing or eliminating all consumer demand within a product class (tobacco) in competition with the marketing actions of the (tobacco) industry.

In a social marketing context, demarketing aims to deflate demand by discouraging consumption or use of products such as alcohol and cigarettes that pose health risks (Comm, 1997). Governments use various demarketing strategies and instruments to curb smoking, including tobacco advertising bans (Saffer and Chaloupka, 2000), price increases (Andrews and Franke, 1991), and smoking bans (Wall, 2005). Whilst research exists in a demarketing context on individual elements of the marketing mix and their effect on smoking cessation, relatively little is known about how the 4Ps work in conjunction toward the goal of governmental demarketing, including tobacco. Furthermore, research on how demarketing activities influence consumer behavior over time is scarce.

The authors’ investigation of this topic contributes to the anti-consumption and social marketing literature in numerous ways. First, they explore the question of whether governmental demarketing through the 4Ps directly and indirectly impacts consumer attitudes and motivation to quit among smokers. Second, based on a conceptual model that links consumers’ elaboration on governmental demarketing activities across the 4Ps to relevant outcome variables, including consumers’ intention to quit smoking, the authors formulate testable hypotheses regarding the differential effects of the demarketing mix elements on the outcome variables. Third, this article provides empirical validation of the model relationships; specifically, the authors test the hypotheses using longitudinal cohort data from a multistage survey. Finally, the authors discuss the findings in relation to existing studies, concluding with suggestions for future research directions relevant to this topic.

2. Governmental demarketing strategies

Traditionally, the 4Ps of marketing refer to the various controllable elements of the marketing program. The underlying assumption is that a company needs to develop the right product, at the right price, to get it to their chosen market, in the right place and promote it to its target audience. To achieve demarketing goals regarding their own customers, firms can address one or more marketing decision variables. For example, Kotler and Levy (1971) mention “steps to encourage deconsuming” (p. 76) including curtailing advertising expenditures and sales promotions, increasing the price and other conditions of sale, and adding time and expenses necessary for the consumer to obtain the product. In the past, governments tended to use similar demarketing actions in isolation. Recently, governments employ more comprehensive demarketing activities to dissuade people from consuming tobacco and develop a demarketing mix to combat smoking and smoking-related behavior more effectively (see Hoek, 2004; Wall, 2005). Indeed, Wakefield and Chaloupka (2000) report that comprehensive tobacco control programs involving a range of coordinated and coexisting tobacco control strategies can work in a synergistic fashion to reduce smoking rates.

In the conceptualization of the demarketing mix elements for this article, product is framed as product replacement and displacement. In essence this demarketing variable aims to assist smokers in quitting by offering free or low-cost replacement products (e.g., nicotine replacement therapies) as well as support services (e.g., telephone quit-line and other information services). The demarketing variable price is mainly delivered via increased taxation and hence sales price. From a consumer perspective price is a monetary sacrifice that results in a reduction of wealth (Erickson and Johansson, 1985; Jacoby and Olson, 1985). Similar to most product categories we can expect a negative relationship between cigarette price and consumption quantity (Erickson and Johansson, 1985; Lee et al., 2005). Conceptualized differently from distribution, place in this governmental demarketing context is the prohibition of place of consumption through selective smoking bans such as on public transport, and broader clean-air smoking bans in public places. In general, impediments in obtaining a product coupled with restrictions in consumption opportunities will result in reductions in consumption of the product (Anderson, 1972; Wakefield and Chaloupka, 2000). Promotion in this context is social counter advertising, mandatory warning labels as well as restrictions on tobacco advertising. Anti-smoking advertising and warnings highlighting the health harms associated with smoking are likely to negatively affect consumers’ smoking-related attitudes and opinions. Consumers who engage with anti-smoking messages will likely alter their smoking-related
attitudes and change their opinion about smoking to a less favorable position (Andrews et al., 2004).

Drawing on Cullwick (1975, p. 54) the distinction between the 4Ps in a conventional sense and the 4Ps in a governmental demarketing anti-tobacco context is given in Table 1.

### 3. Conceptual model and hypotheses

Fig. 1 displays the conceptual model over two data waves. The following section provides an overview of the model together with the rationale for the hypothesized relationships between the constructs.

#### 3.1. Model overview

This model links independent variables (consumer’s elaboration on the demarketing 4Ps) with a dependent variable (intention to quit), mediated by the key variables of attitude toward tobacco companies and attitude toward smoking. Conceptualizing the 4Ps from a consumer perspective and linking them to consumer intention via attitudinal mediators is novel and contributes to the literature on anti-consumption, particularly within the area of governmental demarketing. Modeling governmental demarketing from a consumer perspective allows one to determine the impact of this government approach not only on consumers’ intention to cease consumption, but also on consumer attitudes both toward consuming the product and toward companies that promote and sell these products. These three outcomes are all central objectives of a government’s anti-consumption drive against tobacco.

This article adopts a cognitive response approach to persuasion (e.g., Chaiken, 1987; Petty et al., 1981) to examine the impact of cognitive elaboration on attitudinal and behavioral change. Accordingly, persuasion takes effect when consumers generate and elaborate on their own thoughts in response to the demarketing actions. Effective persuasion and attitude change require that consumers participate actively in the persuasion process and that favorable issue-relevant thoughts (about the 4Ps) are generated (Eagly and Chaiken, 1993; Petty and Cacioppo, 1986). Attitude changes based on low levels of elaboration are known to be less durable and more open to subsequent attack (Petty et al., 1995; Petty and Krosnick, 1995) leading to failures in initiating or sustaining the desired behavior (i.e., quitting). Therefore high levels of consumer elaboration on the

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<td>Task-level budgets</td>
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Fig. 1. The conceptual model.
merits of quitting in response to the demarking 4Ps should have a negative effect on their attitude toward tobacco companies and attitudes toward smoking with a consequential positive effect on intention to quit. This study captures longitudinal data on each respondent and allows an examination of the extent to which elaboration will yield durable attitudinal change and higher levels of intention to quit.

The diverse nature and focus of the four demarking elements (product, price, place, and promotion) should yield differential impacts on consumer attitudes and specific hypotheses need to be presented to clarify these relationships. The section below addresses these hypotheses.

3.2. Model relationships and hypotheses

3.2.1. Product

The majority of smokers have a strong desire to quit. However, the addictive nature of tobacco acts as a powerful deterrent regarding initiating and sustaining quitting attempts. Statistics show that 78% of smokers try to give up smoking and 83% regret adopting the habit (Lader and Goddard, 2004). However, only a marginal number (3–5%) manage to maintain cessation for a minimum of 12 months (Centers for Disease Control and Prevention, 2002; Hyland et al., 2004). Much research shows that the use of replacement products such as nicotine replacement therapy (NRT) and other behavioral programs such as quit-lines and group support sessions boost motivation to quit and substantially improve sustained long-term cessation (Hughes et al., 2003; Lancaster et al., 2000; Silagy et al., 2003; Silagy and Stead, 2003; Stead and Lancaster, 2003; Wenneke et al., 2003). Therefore, smokers’ elaboration on product alternatives and support programs should result in a stronger intention to quit. Given the high levels of past quitting attempts and regret, such elaboration to generate thoughts about the undesirable addictive nature of tobacco should also result in negative attitudes both toward smoking and toward suppliers of such products. Thus, H1: Product elaboration (i.e., elaboration on quitting associated with the demarketing element Product) affects consumers’ attitude toward the tobacco industry, attitude toward smoking, and intention to quit smoking. Specifically:

(a) product elaboration negatively affects consumers’ attitude toward the tobacco industry
(b) product elaboration negatively affects consumers’ attitude toward smoking
(c) product elaboration positively affects consumers’ intention to quit smoking.

3.2.2. Price

In strictly economic terms, price increases have a dampening effect on demand (e.g., Varian, 1993). Levy et al. (2004) report that taxation induced large price increases can result in reducing smoking prevalence by at least 10%. Maxwell (2002) reports that pricing has a direct effect on consumer attitude. Furthermore, if consumers perceive prices to be unreasonably high, they are likely to form both negative attitudes toward the product and a low intention to purchase (Xia et al., 2004). However, price increases if attributed to government taxation should not have a significant effect on smokers’ attitude toward tobacco companies. This reasoning leads to a second set of hypotheses: H2. Price elaboration (i.e., elaboration on quitting associated with the demarketing element Price) affects consumers’ attitude toward smoking, and intention to quit smoking, but not their attitude toward the tobacco industry. Specifically:

(a) price elaboration does not affect consumers’ attitude toward the tobacco industry
(b) price elaboration does negatively affect consumers’ attitude toward smoking
(c) price elaboration does positively affect consumers’ intention to quit smoking.

3.2.3. Place

One of the strongest governmental demarking actions takes the form of smoking bans in public places leading to a negative public perception of smoking and of smokers, resulting in negative stereotyping and stigmatization of smokers (Gilbert et al., 1998; Pechmann and Knight, 2002). Moore (2005) reports that such negative connotations hold true even amongst smokers themselves. Smokers’ elaboration on restrictions regarding places of consumption should therefore have a direct effect on their attitude toward smoking. However, place restrictions should not have a direct effect on smokers’ attitude toward tobacco companies as such restrictions are clearly attributable to government and not to tobacco companies. Beyond the influence of attitude toward the product and toward the behavior, Ajzen (1991) suggested that control measures which serve as barriers to enact the behavior have a significant impact on intention. Restrictions on places to consume represent a major barrier to consumption and should have a direct impact on intention to quit. Consumers’ increasing demand for convenience has been attributed to various factors including opportunity costs (e.g., Berry et al., 2002; Cox, 1959). Spending more time and effort on consuming cigarettes will reduce consumers’ time for necessary activities such as self maintenance, household maintenance, and leisure. Therefore restrictions on places to consume tobacco should be positively correlated with smokers’ quit intention. Hence, H3. Place elaboration (i.e., elaboration on quitting associated with the demarketing element Place) affects consumers’ attitude toward smoking, and intention to quit smoking but not their attitude toward the tobacco industry. Specifically:

(a) place elaboration does not affect consumers’ attitude toward the tobacco industry
3.2.4. Promotion

A ban on cigarette advertising through television and radio has been in place in the U.S. since 1971. However, Saffer and Chaloupka (2000) conclude that governmental demarketing of tobacco through advertising bans in the U.S. will have little effect on tobacco consumption unless a comprehensive ban is enforced.

Anti-smoking campaigns in the U.S. have in the past presented tobacco companies as manipulative, dishonest and complicit in knowingly causing harm to smokers through their products (Goldman and Glantz, 1998). Such anti-smoking promotions should have a negative effect on consumers’ attitude toward tobacco companies. Separately, Romer and Jamieson (2001) posit that anti-smoking advertising is an effective form of counter advertising against the approval and attractive imageries promoted through tobacco advertising (see also Engleman, 1987). Research shows that government sponsored anti-smoking campaigns reduce positive perceptions of smoking and hence have a direct negative effect on attitude toward smoking (Siegel and Biener, 2000). Further, campaigns that communicate the harmful effects of smoking are known to lead to changes in audience’s smoking-related attitudes (Page and Colby, 2003). Finally, such campaigns are also posited to have a direct negative effect on intention to smoke (Andrews et al., 2004). Hence, H4. Promotion elaboration (i.e., elaboration on quitting associated with the demarketing element Promotion) affects consumers’ attitude toward the tobacco industry, attitude toward smoking, and intention to quit smoking. Specifically:

- (a) promotion elaboration negatively affects consumers’ attitude toward the tobacco industry
- (b) promotion elaboration negatively affects consumers’ attitude toward smoking
- (c) promotion elaboration positively affects consumers’ intention to quit smoking.

3.2.5. Relationship between attitudes and intention

Extensive research has shown that attitude is a key antecedent to intention (e.g., Ajzen and Fishbein, 1980). Empirical studies (e.g., McMillan and Conner, 2003; Moan and Rise, 2005; Wiium et al., 2006) indicate that both beliefs about the negative consequences of smoking as well as direct measures of attitude have a strong impact on smokers’ intention to quit (Andrews et al., 2004; Haley and Baldinger, 1991; Hassan et al., 2007). Governmental anti-smoking advertisements tend to also condemn the tobacco industry, either implicitly or explicitly (Andrews et al., 2004; Biener et al., 2000; Thrasher and Jackson, 2006). Consumers that have a favorable attitude toward the tobacco industry, despite the existence of anti-smoking measures, are less likely to quit smoking. Hence attitude toward tobacco companies and attitude toward smoking should both impact smokers’ intention to quit. Specifically:

- H5. Consumers’ attitude toward the tobacco industry will negatively affect their intention to quit smoking both within period one (H5a) and within period two (H5b).
- H6. Consumers’ attitude toward smoking will negatively affect their intention to quit smoking both within period one (H6a) and within period two (H6b).

3.2.6. Longitudinal relationships

Much debate surrounds the stability of attitudes (see Wilson and Hodges, 1992 for a discussion) with some evidence in support of the case for enduring attitudes. Indeed, Petty and Cacioppo (1981, p. 7) define attitude as “enduring positive or negative feelings about some person, object, or issue”. However, counter evidence shows that attitudes can be taken as temporary constructions (e.g., Tesser, 1978; Tesser and Shaffer, 1990), yet Wilson and Hodges (1992) find some evidence that strong attitudes can be stable. Smokers’ attitudes toward tobacco companies are unlikely to improve over time. The practices of the tobacco industry are under increasing public scrutiny and met with suspicion. In addition, governmental anti-smoking campaigns tend to be critical of the tobacco industry. The continuous and consistent anti-tobacco campaigns that enact and reinforce smoke-free laws and regulations are likely to affect stable attitudes. On balance, the influences of the demarketing 4Ps on...
smokers’ attitude will bear a positive relationship from one time period to the next. Thus,

H2. Consumers’ attitude toward the tobacco industry in period one will positively relate to their attitude toward the tobacco industry in period two.

H3: Consumers’ attitude toward smoking in period one positively relates to their attitude toward smoking in period two.

Literature extensively demonstrates that smokers engage in many quitting attempts (e.g., Debono et al., 2004; Niaura and Abrams, 2002). Indeed, one predictor for successful quitting is past quitting attempts (Abdullah and Yam, 2005). Given that the sample of respondents in this study are smokers throughout the data collection periods, the underlying motivation (and hence intention) to quit smoking is likely to remain similarly strong (or weak) across the two periods, though a significant shift in attitude would weaken or indeed reverse this relationship. Thus:

H4. Consumers’ intention to quit in period one positively relates to their intention to quit in period two.

4. Research method

4.1. Data collection

This research used data from the International Tobacco Control (ITC) Four Country Survey, (http://www.itcproject.org). This nationally representative, longitudinal panel survey of adult smokers was designed to evaluate the impact and mechanisms of impact for a number of key government policy initiatives to reduce tobacco consumption. The survey began in 2002 and the data used for this article come from two time periods, with the first wave collected between October and December 2002 and the second wave between May and August 2003. The Environmetrics Research Group conducted telephone interviews in the U.S. with a continuing cohort of respondents (see Thompson et al., 2006 for full details). Initial contact with respondents was made using probability sampling methods (random-digit-dialing methods from list-assisted telephone numbers) with numbers selected at random from the population of the U.S. within strata defined by geographic region and community size.

Inclusion criteria for this article defined smokers as those who reported having smoked at least 100 cigarettes in their lifetime and who still smoked at least once a day. After excluding participants (241) with missing responses, a final sample of 964 smokers remained for analyses. Based on the 2002 data, the mean age of respondents was 43 years (SD=13.66) and 58% were female. The average number of cigarettes smoked per day was 20 (SD=10.44).

4.2. Measures

4.2.1. Elaboration

Smokers’ elaboration of the demarketing policies was assessed with seven items that addressed the 4Ps in response to “In the past six months, have each of the following items led you to think about quitting: not at all, somewhat or very much?” Two of these seven items, “Free or lower-cost stop-smoking medication” and “Availability of telephone quit-lines”, were averaged to assess product. One item, “Price of cigarettes” measured price. Two items, “Smoking restrictions at work” and “Smoking restrictions in public places like restaurants or bars” were averaged to assess place. Two items, “Advertisements or information about the health risks of smoking” and “Warning labels on cigarette packages” were averaged to measure promotion.

4.2.2. Attitude and intention

The authors assessed attitude toward the tobacco industry with two items: “Tobacco companies should take responsibility for the harm caused by smoking” and “Tobacco products should be more tightly regulated”. These items had a 5-point response option from “agree” to “disagree”. The authors measured attitude toward smoking with a single item, “What is your overall opinion of smoking?” with a 5-point scale ranging from “very negative” to “very positive”.

Finally, one item, “Are you planning to quit smoking” assessed intention to quit. The four response options “not planning to quit”, “sometime in the future, beyond six months”, “within the next six months”, and “within the next month” are converted into a scale 0, 1, 2, 3 as stages of change (short form) adapted from the Transtheoretical Model of Change (DiClemente et al., 1991).

4.3. Data analysis

The authors used structural equation modeling to test the hypothesized relationships within the model. To assess model fit the Tucker–Lewis Index (TLI), the comparative fit index (CFI) and root mean square error of approximation (RMSEA) in

<table>
<thead>
<tr>
<th>Hypothesized path</th>
<th>Hypothesized path</th>
<th>β</th>
<th>Critical ratio</th>
<th>Hypothesis supported Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a Product → Attitude (industry)</td>
<td></td>
<td>−.18**</td>
<td>−3.81</td>
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<td></td>
<td>−.06</td>
<td>−1.51</td>
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<tr>
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<td>.00</td>
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<tr>
<td>H2a Price → Attitude (industry)</td>
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<td>−.13**</td>
<td>−3.02</td>
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<td>−.14**</td>
<td>−4.15</td>
<td>N</td>
</tr>
<tr>
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<td>.17**</td>
<td>5.25</td>
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<tr>
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<tr>
<td>H3b Place → Attitude (smoking)</td>
<td></td>
<td>.04</td>
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<td>−4.27</td>
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<td>H5d Attitude (smoking) → Intention (period 2)</td>
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<td>H6 Attitude (industry period 1) → Attitude (industry period 2)</td>
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<td>.47**</td>
<td>16.50</td>
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Note: *p<.05, **p<.01.
addition to the chi-square statistic ($\chi^2$) were used. Bentler (1990) proposed that the incremental indices CFI and TLI, which are less affected by sample size, should be used for assessing model fit. The indices CFI and TLI are considered acceptable above a value of 0.9; however, some researchers advocate a 0.95 limit (Hu and Bentler, 1999). An RMSEA value less than 0.1 is indicative of acceptable fit and at 0.06 or below often considered good (Steiger, 1990). AMOS 6.0 was used to conduct all structural analyses.

5. Results

Table 2 displays the zero order correlations of the variables used in the model. All correlations are significant at $p < .01$. All correlations are moderate ($r < .5$) between the variables within each period indicating no concern regarding discriminant validity. The strong correlation between attitudes toward the tobacco industry across the two time periods suggests a degree of stability of this attitude within the respondents.

Table 3 shows the results of the hypothesized model. The fit of the model is good ($\chi^2_{(36)} = 135.51; p < .01$, CFI = .963, TLI = .931, RMSEA = .055) according to the usual conventions. Paths between the construct attitude toward tobacco companies and its indicators are both significant at $p < .01$. The model yielded $R^2 = .21$ for intention to quit for period one and $R^2 = .33$ for period two. Table 3 shows that 15 out of 19 hypotheses are supported by the data. Hence, the model and relationships developed and tested in this study make sound contributions to knowledge. However, two of the hypothesized relationships on product elaboration, one on price elaboration and one on place elaboration failed to be supported and require further discussion.

To fully assess the effects of the mediators (attitude toward tobacco industry and attitude toward smoking), the analyses include four separate sets of regression analyses in accordance with Baron and Kenny’s (1986) recommendations. The results show that the mediators only partially mediated the effects of each of the 4Ps on intention to quit. In each case, the direct effect of each demarketing element on intention is significant over and above the effects of the mediators in the hierarchical regression.

6. Discussion

This research advances demarketing research in an anti-consumption context by empirically assessing the influence of demarketing measures on smokers’ attitudes and their intention to quit smoking. Specifically, two waves of a survey were used to test the effect of smokers’ elaboration as a consequence of the four demarketing elements, product, price, place, and promotion. To fulfill this purpose this article (1) develops a conceptual model in which the 4Ps of demarketing are treated as determinants of smokers’ attitude and quitting intention, (2) formulates testable hypotheses on direct, mediating and longitudinal effects, and (3) tests the model against empirical data from two survey waves, based on the same sample of respondents.

The empirical data support all but four hypotheses (see Table 3). The results show that smokers’ elaboration as a consequence of the demarketing element product does not affect their attitude toward smoking nor their intention to quit. A reason for these (non-significant) relationships might be that despite greater awareness and availability of free or lower-cost stop-smoking medication and telephone quit-lines, smokers do not have sufficient trust in the efficacies of the medication and quit-line services. The fact that the vast majority (78%) of smokers have made quit attempts (Lader and Goddard, 2004), yet very few (3–5%) sustain cessation over twelve months (Centers for Disease Control and Prevention, 2002; Hyland et al., 2004), supports the observations of this study. Next, smokers’ elaboration as a consequence of the demarketing element price does negatively affect their attitude toward the tobacco industry. Unlike $H_{2a}$, smokers do attribute higher prices to the tobacco industry. The fact that the industry initiates almost all price increases in the wider consumer market means that the consumers in this study may also attribute price increases, in tobacco, to the industry’s pursuit of higher profits. Finally, the data show that smokers’ elaboration as a consequence of the demarketing element place does not affect their attitude toward smoking. Because finding a place to smoke has become much more difficult, smokers might associate the cigarette with a reward in the event they find a smoking space. This scenario would lead to a negative attitude toward the barrier (smoking ban) rather than the reward (smoking).

In terms of the longitudinal effects of attitudes and intention from period one to period two, Table 2 shows that the correlations between the measures of attitude toward smoking in time period one and time period two is modest ($r = .49$) suggesting that attitudes toward smoking by smokers do change over time. A similarly moderate correlation ($r = .55$) exists between smokers’ intention to quit across the two time periods. The government demarketing 4Ps contribute toward these changes which are in themselves central objectives for governments engaging in such anti-consumption interventions against tobacco. However, a high correlation ($r = .85$) exists across the two time periods regarding smokers’ attitude toward the tobacco industry, indicating less changes of attitude in this regard. Table 2 also gives the mean value for each variable. The authors conducted paired $t$-tests and the results show that attitude toward smoking decreased significantly ($p < .01$) from period one to period two. A significant ($p < .01$) increase is obtained for intention to quit smoking. However, no significant difference is found for attitude toward the tobacco industry across the two periods. Taken altogether, the results show that the governmental demarketing activities during 2002 and 2003 in the U.S. have made a significant impact on smokers’ attitudes and intention to quit. Further, these demarketing activities have yielded beneficial changes in smokers’ attitude toward smoking and their intention to quit over the period of the study.

This study is an important step forward in providing the field of social marketing and anti-consumption with a parsimonious 4P model that considers measures aimed at deflating consumer demand. The primary contribution to theory lies in developing and testing a model that captures longitudinal effects of demarketing activities that have a differential impact on smokers’ attitude toward the tobacco industry and toward smoking as well as their intention to quit. The study further shows that some model relationships hold across the two waves. Specifically, smokers’ attitude toward the tobacco industry in
time period one influences their attitude toward the tobacco industry in time period two. The study also finds the same effect for attitude toward smoking and intention to quit smoking.

Thus, this study represents an important step in assessing the efficacy of demarketing measures over time. Further, integration of the 4Ps of demarketing has benefits at both the conceptual and managerial level. The model enables social marketers to study and measure the effectiveness of the 4Ps at different levels of abstraction. Researchers and social marketers can both consider individual elements of the demarketing mix (lower level of abstraction), as well as look at the overall model and all 4Ps (higher level of abstraction) to learn something about the effectiveness of the 4Ps of demarketing in terms of influencing relevant outcome variables.

This study demonstrates the differential effect of the 4Ps of demarketing and the central significance of promotion and price, which are the only demarketing mix elements that influence all three outcome variables, attitude toward the tobacco industry, attitude toward smoking, and intention to quit smoking. At the same time, the empirical evidence from this study shows that the demarketing mix element product, in terms of product replacement and displacement through the promotion of NRT and behavioral support programs, is less effective in terms of changing smokers' attitude toward smoking and intention to quit smoking. Lastly, smoking restrictions at work and in public places do not influence attitude but have a small direct effect on intention to quit.

6.1. Limitations and future research directions

This research is not free of limitations, which future research may address. First, the study concentrates only on one context here, namely anti-smoking. Future research could investigate if the proposed model is equally effective in other socially responsible behavioral contexts, such as drunk driving and healthy eating. Second, researchers should test the model in other countries where smoking rates are often much higher than in the U.S. For example, the annual per-capita cigarette consumption in Russia increased by 75% to 2058 and in Bulgaria by 14% to 3131 cigarettes from 1994 to 2004. During the same period, the annual per-capita cigarette consumption in France decreased by 42% to 1556 with a similar decrease in the UK (40%) to 1448 cigarettes (Johnson, 2006). Third, this study examined smokers' reactions to and perception of anti-smoking demarketing measures. Given the normative power of reference-group and word-of-mouth influence, future studies should investigate the perceptions and influences of non-smokers. Finally, longitudinal research on the 4Ps of demarketing is needed to understand the full value of these demarketing measures designed to influence the adoption of (critical) smoking-related attitudes and the intention to quit smoking.

6.2. Implications for social marketing and public-policy makers

The 4Ps are sometimes useful for increasing consumer demand for goods and services. This study suggests that in social marketing and in anti-consumption contexts the 4Ps are treated not in the same way as they are for profit-oriented firms. As well as being useful variables in their own right, the results also show that the 4Ps of demarketing are important drivers of smokers’ smoking-related attitudes and their quitting intention. The implication for social marketers and consumer-policy makers is that anti-smoking measures need to be thoroughly tested to ensure that members of the target audience are inclined to elaborate on them.

The results also show that promotion and price are important as these constitute the two demarketing mix elements that affect smokers’ smoking-related attitudes and their quitting intention. In the U.S. the link between the 4Ps and attitude toward the tobacco industry and smoking is often strongest for promotion, with product often second (for attitude toward the tobacco industry), then price (for attitude toward smoking). The results also show that once the 4Ps of demarketing affect the three outcome variables, the effects hold over time.

Three lessons flow from this research. First, social marketers and consumer-policy makers cannot assume individual demarketing measures will be effective in changing the attitudes and behavior of the members of the target audience. Only a comprehensive demarketing mix, aimed at decreasing the attractiveness of tobacco and impeding the availability and consumability of cigarettes, is likely to result in measurable changes. Second, ad hoc and one-off demarketing measures are unlikely to have the desired effect. The results show an effect over time of the 4Ps of demarketing, suggesting that governments should equip anti-smoking campaigns with sufficient and sustained demarketing resources. Third, attitudes and behavioral intentions, however plausible and well established, which prevail in the U.S. may not apply to other countries. Attitudes and behavioral intentions may be affected by inter-country differences in terms of smoking prevalence, favorable social norms about smoking, the tobacco industry’s role in the national economy, or factors which discourage the government to deflate tobacco consumption.

6.3. Conclusion

Social marketing can use the 4Ps in reverse to alter certain audiences’ attitudes and behaviors. Furthermore, the influences of the 4Ps can be stable over time. On a theoretical level this study increases understanding of how social marketing is able to change attitudes and behavior. On a practical level this study has important implications for how social marketers should employ the 4Ps in campaigns from governmental and charitable organizations to maximize conversion to socially responsible behaviors.

References


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