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Smoking Behavior Demarketing Model: Focus on Behavior, Not Intention

Muhammad Johan Widikusyanto
Faculty of Economics and Business, Sultan Ageng Tirtayasa University

Abstract

This research aims to develop a demarketing model that directly tests the influence of various factors on smoking behavior and formulate various strategies to reduce smoking behavior based on the model. The field of Marketing Science is typically employed to support or enhance the marketing of a product. The research on Demarketing Tobacco Use has evolved from using only one variable in the marketing mix to using all or four variables in the marketing mix. However, the existing Demarketing Tobacco Use or cigarette strategy still has limitations and needs to be further developed. The current Demarketing Tobacco Use strategy only tests the intention to quit smoking. This research is more accurate because it directly tests various factors that influence smoking behavior, not just testing the intention to smoke. The questionnaire was distributed to active smokers with a total of 595 respondents. The collected data was then analyzed using SEM. The findings of this study indicate that product, price, and promotion of cigarettes influence smoking behavior, while distribution does not. Based on these findings, several strategies can be formulated to reduce smoking behavior.

Keywords: *Demarketing; Marketing Mix; Smoking Behavior; Strategy*

Correspondence*: mjohanw@untirta.ac.id*

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INTRODUCTION

The tobacco epidemic stands as one of the most significant public health threats ever faced by the world, claiming over 8 million lives annually worldwide. More than 7 million of these deaths result from direct tobacco use, while approximately 1.2 million are attributed to non-smokers exposed to secondhand smoke (WHO, 2021).

Tobacco use accounts for 25% of global cancer-related deaths. The consumption of nicotine and tobacco products elevates the risk of cancer, cardiovascular diseases, and respiratory ailments (WHO, 2020). Nearly half of children regularly inhale tobacco smoke in public places, with 65,000 succumbing annually to diseases caused by passive smoking. In infants, this increases the risk of sudden infant death syndrome, while in pregnant women, it leads to pregnancy complications and low birth weight (WHO, 2021).

Adding to the concerning statistics, Indonesia ranks third globally with the highest number of smokers, totaling 74 million individuals out of a global adult smoking population of 1.1 billion (P2PTM Kemenkes RI, 2018). Alarmingly, approximately 225,700 people in Indonesia die each year due to smoking-related issues (WHO, 2020). Despite these grim figures, Indonesia is the only country in Southeast Asia yet to ratify the WHO FCTC (WHO, 2020), even though the average smoking rate in the country is among the highest worldwide.

As of now, 8 million lives globally and 225,700 lives in Indonesia annually are lost due to smoking (WHO, 2020). Therefore, research on various strategies to help curb or eliminate smoking behavior in the Indonesian population is still highly necessary, crucial, and urgent. Marketing science, typically used to support or develop the marketing of products, is employed in this study to obstruct or even halt the marketing activities of products that pose significant and deadly risks to society, such as cigarettes.

The emergence of various negative impacts due to smoking behavior, ranging from dangerous diseases to death in various countries, has given rise to the idea of Demarketing for cigarettes. The demarketing strategy was initially used to reduce demand and consumption of harmful products such as alcohol and similar products. One of the early researches on Demarketing Tobacco Use was conducted by Inness et al. (2008), where they examined Demarketing Tobacco Use only through price to encourage smokers to quit smoking. One year later, Hassan et al. (2009) followed up with a study that only examined the effectiveness of the demarketing campaign with the theme "HELP – for a life without tobacco" in Europe. Research on Demarketing Strategy has evolved from only using one variable in the marketing mix to using all four variables in the marketing mix. Shiu et al. (2009) developed Demarketing Tobacco Use by adding variables that influence the intention to quit smoking to the 4Ps, namely Product, Price, Distribution, and Promotion. The use of the 4Ps complements previous research that only used the price variable as well as campaigns through advertising and education. Additionally, Shiu et al. (2009) also tested the influence of the 4Ps on smokers' attitudes.

In 2016, Demarketing Tobacco Use was also studied in India by Chauhan & Setia (2016), and a year later by Baporikar & Fotolela (2018), both using the 4Ps. Then, in 2021, Demarketing Tobacco Use was also studied in Indonesia by (Tielung et al., 2021), who also used the 4Ps to examine its impact on smoking cessation intention, but without testing smokers' attitudes.

The study of the Demarketing Tobacco Use strategy is in progress, as previously marketing was commonly used to promote cigarettes and encourage smoking behavior among all groups, including children. Through the study of the Demarketing Tobacco Use strategy, marketing is used to reduce demand and consumption of harmful products such as cigarettes. However, this Demarketing Tobacco Use strategy still has limitations and needs to be continuously developed.

The existing Demarketing Tobacco Use strategy only tests up to smoking cessation intention. This research is more accurate because it directly tests various factors that influence smoking behavior, not just intention. Intention to smoke or quit smoking is not accurate in predicting smoking behavior. The best way is to directly study smoking behavior.

This study aims to develop a Demarketing model of smoking behavior consisting of several interrelated marketing variables, including Product, Price, Distribution, Promotion, and Smoking Behavior. Then, Demarketing strategies will be formulated based on that model.

There are still few studies on the effects of marketing mix on smoking behavior, including research by Sinaga et al. (2019), Amalia (2018), Fachriza & Moeliono (2017), Pandayu et al. (2017), Mandey (2013), Zoni & Syam (2013), and Za & Lataruva (2012). Most of the studies in the field of marketing provide benefits for cigarette companies, rather than inhibiting cigarette marketing. This developed Demarketing model combines several variables in the field of marketing into a model that explains how smoking behavior occurs from the perspective of Marketing Science.

The urgency of this research is due to the ongoing consumption of cigarettes and high mortality rates, around 200,000 per year in Indonesia, due to smoking-related illnesses in society (WHO, 2020). This research is expected to contribute significantly to the

field of Marketing Science and help the government and relevant parties reduce smoking behavior in society.

LITERATURE REVIEW

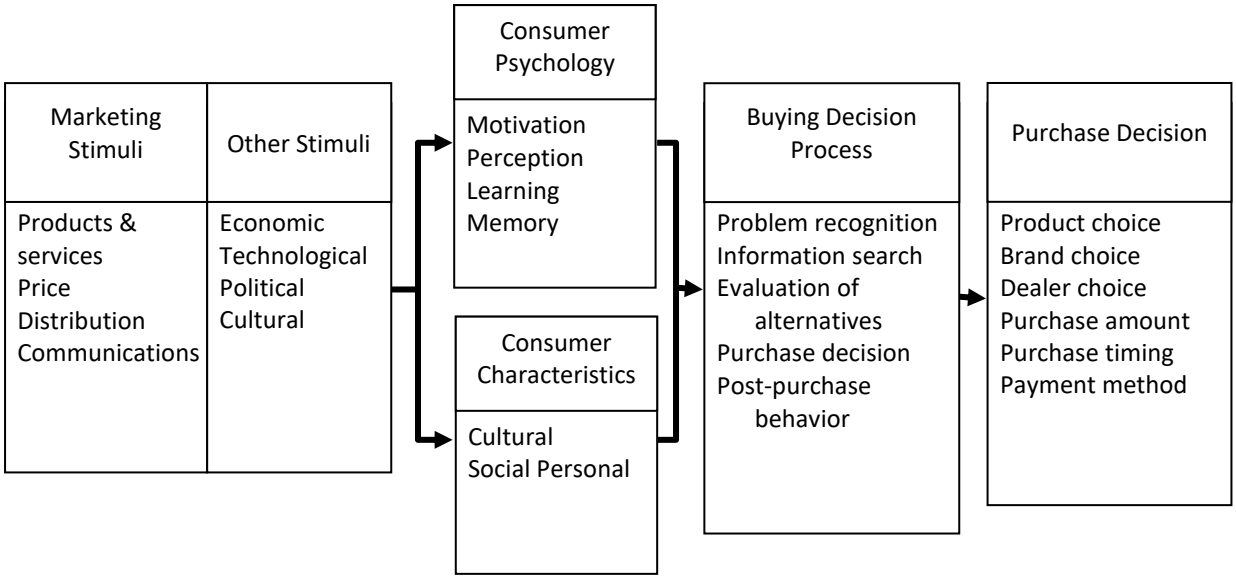
The marketing mix designed and implemented by manufacturers can influence consumer behavior, particularly cigarette consumption behavior. The smoking environment, such as tobacco companies, is an external stimulus that can encourage smoking behavior. Tobacco companies design marketing mix elements such as Product, Price, Distribution, and Promotion (Kotler & Keller, 2016) to create sales and consumption of cigarettes in their target market. Cigarettes and prices that are suitable for the target market's preferences, proper distribution, and effective promotion can encourage them to buy and consume cigarettes.

The Marketing Mix is an organizational element that can be controlled by the company in communicating with consumers and will be used to satisfy consumers. (Kotler & Keller, 2016) have articulated a marketing mix comprising the 4Ps, as follows:

1. Product. It encompasses physical features, quality levels, accessories, packaging, warranties, product lines, and branding.
2. Price. Including flexibility, price levels, terms, differentiation, discounts, and allowances.
3. Place. Encompassing channel types, exposure, intermediaries, outlet locations, transportation, storage, and managing channels.
4. Promotion. Comprising salespeople, advertising, sales promotion, publicity, and internet/web strategy.

Various studies that have examined the influence of the Marketing Mix on smoking behavior include Sinaga et al. (2019), Amalia (2018), Fachriza & Moeliono (2017), Pandayu et al. (2017), Mandey (2013), Zoni & Syam (2013), and Za & Lataruva (2012).

The process of the marketing mix affecting smoking behavior can be understood using the (Kotler & Keller, 2016) Consumer Behavior model, which describes how consumers behave in fulfilling their needs.



Source: Kotler and Keller, (2016)

Figure 1. Consumer Behavior Model

In this model, the consumer purchase decision-making process passes through five stages (Kotler & Keller, 2016), including Problem Recognition, Information Search, Alternative Evaluation, Purchase Decision, and Post-purchase Behavior. The first stage in the smoking behavior process is that smokers will feel the need for something that can help solve a problem, which subjectively they believe can be solved or reduced through smoking. Once they realize that there is a need they want to fulfill, such as relieving stress and creating a sense of calm, improving self-esteem, and enhancing social relationships that can be obtained through smoking, the next step is to gather as much information as possible to help them make the right choice and reduce the risks associated with choosing the wrong cigarette brand. Sources of information about cigarettes can come from commercial sources such as cigarette advertisements, salespeople, and brochures.

After sufficient information has been gathered, prospective smokers enter the stage of choosing from various cigarette alternatives that meet the criteria they have successfully collected. Once the prospective smoker has made a choice, they then form an intention to purchase or use the chosen cigarette brand. Next, the prospective smoker can make a purchase or decide not to buy. If the consumer buys or smokes the chosen brand, the smoker will then evaluate post-purchase or consumption to assess

the level of satisfaction with the cigarette brand they purchased. If they are satisfied, the smoker will make a repeat purchase or consumption. If disappointed, the smoker will stop purchasing or buy a different cigarette brand than before.

Based on the literature review and various studies on smoking behavior mentioned, the model hypothesis proposed in this research is presented in Figure 2 below.

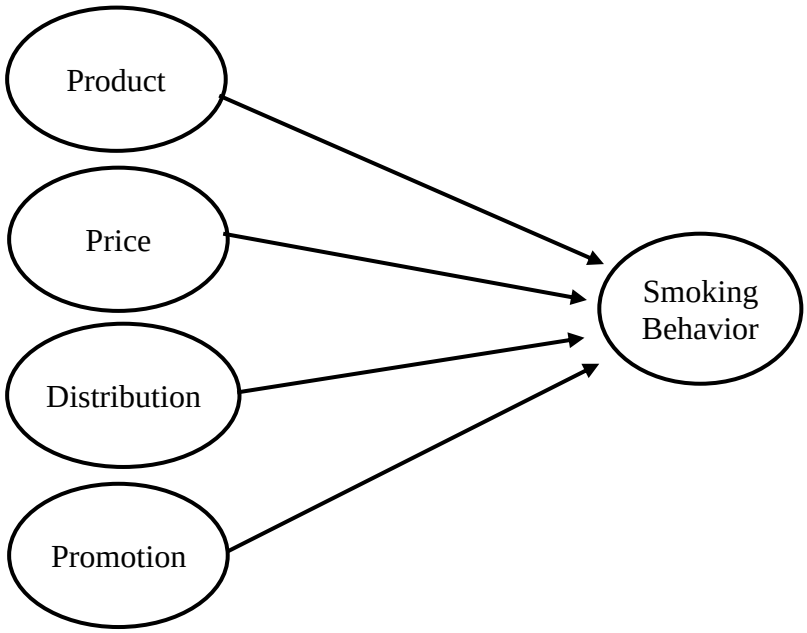


Figure 2. Demarketing Research Model on Smoking Behavior

The model above elucidates the relationship between various variables and Smoking Behavior. The model demonstrates the influence of Product (Cigarettes), Price, Distribution, and Promotion on smoking behavior.

RESEARCH METHODS

This type of research is quantitative and causal, which will test the hypothesized model quantitatively or statistically. Marketing Mix variables (Product, Price, Distribution, Promotion) are measured using seven indicators. The scale used is a 7-point Likert scale that provides answer alternatives from one to seven. Smoking behavior is measured through open-ended questions about the number of cigarettes consumed per day and the duration of smoking in years, using a ratio scale.

Data collection is done using a questionnaire distributed to active smokers and collected directly. The sampling technique used is purposive sampling. The selection criteria for this research sample are respondents who still smoke. The sample size set is 600 respondents. After the questionnaire was distributed in the Banten region of Indonesia, 600 questionnaires were collected, and 5 questionnaires could not be used due to incomplete answers. Thus, the final sample size is 595.

The research instrument is tested for validity and reliability using Factor Analysis and Cronbach Alpha. The analysis of the research model uses structural equation modeling (SEM) with the help of the AMOS program. Testing of the model hypothesis is done after the model meets the required Goodness-Of-Fit value.

The results of the instrument test are presented in Table 1.

Table 1

Instrument Test Results

Question Items	Validity	Reliability
Product		
Cigarette X has many variations	0.574	
Cigarette X has good quality	0.709	
The Cigarette X brand name is good	0.760	0.815
The Cigarette X design is good	0.816	
Cigarette X packaging is good	0.795	
Cigarette X size is appropriate	0.539	
Price		
Cigarette X price is cheap	0.837	0.813
Cigarette X price is reasonable	0.849	
Cigarette X price is affordable	0.817	
Distribution		
Cigarette X is easy to find	0.723	
Cigarette X is easy to buy	0.799	0.876
Cigarette X is easily found	0.801	
Cigarette X is easy to spot around me	0.788	
Cigarette X is available everywhere	0.831	
Promotion		
I often see Cigarette X TV commercials	0.641	
Cigarette X TV commercials are good	0.710	
I often see Cigarette X banners	0.775	0.813
Cigarette X banners are good	0.788	
A Cigarette X salesperson has offered to buy cigarettes	0.722	
The Cigarette X salesperson is attractive	0.633	

In the validity column, all question items have loading factors above 0.05. Meanwhile, the Cronbach Alpha values of each variable in the reliability column are above 0.7. Therefore, the research instrument is valid and reliable.

RESULTS AND DISCUSSION

Descriptive data analysis presents information on the daily consumption of cigarettes, cigarette brands, gender, age, and occupation of the respondents. The number of cigarettes consumed per day is shown in Table 2. The majority of respondents smoke 12 cigarettes or one pack per day, categorizing them as heavy smokers. Heavy smokers have significant adverse health effects, such as cancer, coronary heart disease, stroke, and other dangerous illnesses.

Table 2

Sticks Per Day

No.	Sticks per day	Frequency	Percent
1	12	130	21.8
2	16	72	12.1
3	8	52	8.7
4	6	48	8.1
5	10	42	7.1
6	5	39	6.6
7	4	28	4.7
8	20	27	4.5
9	7	25	4.2
10	3	24	4
	Others	108	18.2
	Total	595	100

The most consumed cigarette brands are presented in Table 3. The most widely consumed cigarette brand is Sampoerna, followed by Gudang Garam and Marlboro. The data indicates that Sampoerna is the preferred brand among the majority of respondents.

Table 3

Cigarette Brands

No.	Brands	Frequency	Percent
1	Sampoerna	213	35.8
2	Gudang Garam	153	25.7
3	Marlboro	53	8.9

No.	Brands	Frequency	Percent
4	Djarum	50	8.4
5	Esse	28	4.7
6	Clas mild	26	4.4
7	Magnum	24	4
8	Dji Sam Soe	16	2.7
9	Dunhill	15	2.5
10	L.A	9	1.5
	Others	8	1.4
	Total	595	100

The gender of smokers is presented in Table 4. Smoker respondents are predominantly male, followed by females with a significant difference in numbers. This data indicates that smoking behavior is not popular among female respondents.

Table 4

Gender

No.	Gender	Frequency	Percent
1	Men	569	95.6
2	Women	26	4.4
	Total	595	100

The age of smokers is presented in Table 5. The majority of smokers are 20 years old. This data indicates that smokers are predominantly young or those who have reached adulthood.

Table 5
Age

No.	Age	Frequency	Percent
1	20	128	21.5
2	21	83	13.9
3	19	67	11.3
4	22	51	8.6
5	25	33	5.5
6	23	30	5
7	18	26	4.4
8	24	24	4
9	30	19	3.2
10	26	16	2.7
	Others	118	19.9
	Total	595	100

The occupation of smokers is presented in Table 6. Smokers are predominantly students, followed by private employees and entrepreneurs. This data indicates a low awareness of the dangers of smoking among students, who should ideally have higher awareness compared to other societal groups, as they are undergoing an educational process that should guide them toward healthy and correct behaviors. The possible cause could be the failure of educational institutions to instill healthy habits or behaviors.

Table 6

Occupation

No.	Occupation	Frequency	Percent
1	Student	333	56
2	Private Employee	121	20.3
3	Entrepreneur	90	15.1
4	Online Driver	15	2.5
5	Civil Servant	12	2
6	Unemployed	8	1.3
7	Construction Worker	6	1
8	Housewife	5	0.8
9	Parking Attendant	1	0.2
10	Fisherman	1	0.2
	Others	3	0.6
	Total	595	100

Structural Model Testing was conducted after the model met the required Goodness-Of-Fit values. The goodness-of-fit model estimation results are displayed in Table 7.

Table 7

Goodness-Of-Fit Results

Indeks Criteria	Reference	Results
CMIN/DF	< 5	2.520
GFI	> 0,90	0.931
AGFI	> 0,90	0.911
CFI	> 0,90	0.944
TLI	> 0,90	0.934
RMSE	< 0,07	0.051

Based on Table 7, the tested model is a good fit because the model's suitability index measures have been met, such as CMIN/DF, GFI, AGFI, CFI, TLI, and RMSEA.

Furthermore, the influence of the marketing mix on smoking behavior is shown in Figure 3, which displays the significance level based on probability values.

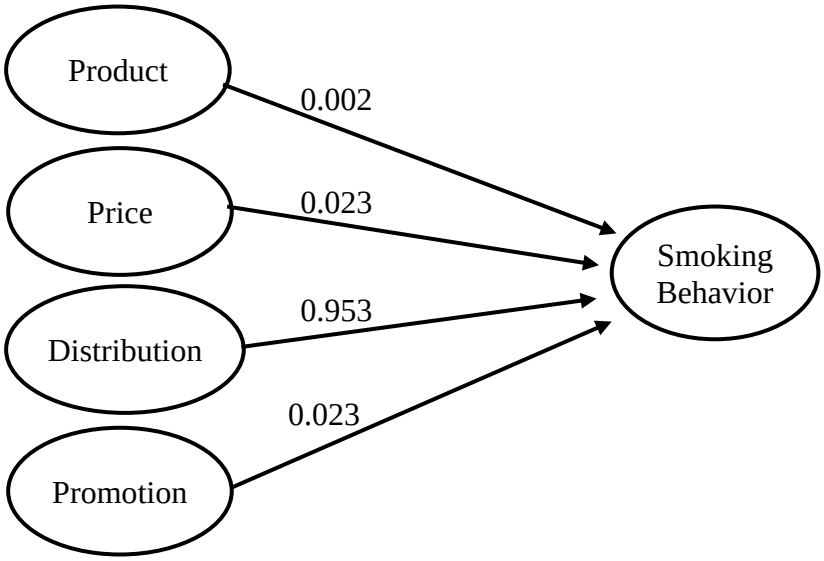


Figure 3. Results of Testing The Relationship Between Variables

The SEM analysis showed that all variables except distribution affected smoking behavior. Three variables, namely Product, Price, and Promotion, significantly influenced smoking behavior with probability values below 0.05, while Distribution was found to have no effect with a probability value of 0.953, which is above 0.05.

These findings indicate that cigarette products such as variety, quality, brand, design, packaging, and cigarette length can encourage someone to smoke. In addition, the affordability and cheap price of cigarettes are other driving factors for smoking. Another factor that also encourages and increases smoking behavior is the promotion carried out by cigarette manufacturers through TV advertisements, banners, sales promotion girls (SPG), and other promotional media.

However, the interesting finding in this study showed that although cigarettes are easily accessible, easy to buy, and available everywhere, they do not necessarily encourage smoking behavior. Their smoking behavior does not increase even though they can easily obtain the cigarettes they want. This phenomenon also shows that even if the cigarettes they usually consume are difficult to obtain, they will still smoke and

not reduce their consumption level. This behavior may be caused by the addiction to tobacco or addictive substances contained in the cigarettes they often consume.

Based on these findings, the strategy to reduce smoking behavior can emphasize three main variables, namely product, price, and cigarette promotion. The government can reduce smoking behavior among the public by implementing the following strategies. Firstly, tighten regulations related to cigarette varieties, quality, brands, design, and packaging. The government can limit the cigarette varieties that a brand can have. In addition, the government needs to regulate provisions regarding cigarette brand names so as not to mislead, deceive, or encourage people to try smoking. These provisions may include restrictions on the words that can be used in brand names, as well as limiting the use of certain logos or images that can depict cigarettes as something attractive or tempting. Strict regulations on cigarette brand names can help reduce public interest in trying those cigarettes. The government can also establish design and packaging standards that are not attractive to consumers and prohibit the sale of cigarettes with certain tastes or aromas that are considered more appealing to smokers.

Secondly, significantly increases cigarette prices. The government can raise cigarette taxes, making cigarette prices more expensive. This will affect smokers' decisions to buy cigarettes because higher prices can be a barrier to continued smoking.

Thirdly, ban cigarette promotions through TV advertisements, banners, sales promotion girls (SPG), and other promotional media. The government can issue a policy that prohibits cigarette manufacturers from promoting cigarettes directly to consumers. This will help reduce the influence of cigarette promotions on the public and prevent an increase in the number of smokers.

Fourthly, impose sanctions on companies that violate regulations related to the production and sale of cigarettes. The government can enforce strict sanctions on companies that violate regulations related to the production and sale of cigarettes. These sanctions could be in the form of fines or revocation of business licenses.

Fifthly, increase the information campaign on the dangers of smoking. The government can enhance the information campaign on the hazards of smoking through various media channels, such as television, radio, newspapers, and social media. This

campaign should demonstrate the adverse impacts associated with smoking on the health of smokers and those around them.

Sixthly, improve the smoking cessation assistance program. The government can provide support to smokers who want to quit smoking. This assistance can include treatment, psychological support, and smoking risk reduction programs. These programs should be followed by monitoring and evaluation programs aimed at assessing the success of the programs and making improvements if necessary.

By implementing various strategies as mentioned above, it is expected that the government will be able to suppress smoking behavior in society. However, this requires commitment and collaboration from various parties, including cigarette producers, the public, and the government itself.

CONCLUSION AND RECOMMENDATION

Cigarette products such as variations, quality, brands, designs, packaging, cigarette stick sizes, cheap and affordable cigarette prices, as well as promotion through TV ads, banners, SPG, and other promotional media can be driving factors for smoking behavior. However, distribution factors do not affect smoking behavior. Easy access to cigarettes does not always encourage smoking, and the difficulty of obtaining cigarettes does not make smokers quit smoking. Perhaps this is due to the decision to smoke being more influenced by the addictive factors contained in cigarettes and addiction, rather than the availability of cigarettes themselves.

Strategies to reduce smoking behavior can be focused on three main variables, namely cigarette products, prices, and promotions. The government can implement several strategies to reduce smoking behavior, such as limiting product variations from cigarette brands circulating in the market; regulating the use of cigarette brands; setting design and packaging standards that are not attractive to consumers; prohibiting the sale of cigarettes with certain flavors or aromas that are considered more attractive to smokers; raising cigarette prices by increasing cigarette taxes; prohibiting cigarette promotion through TV ads, banners, SPG, and other promotional media; imposing sanctions on companies that violate regulations related to cigarette production and

sales; increasing information campaigns about the dangers of smoking; and providing assistance to smokers who want to quit smoking. However, to achieve effective results, these strategies require commitment and cooperation from various parties, including cigarette producers, the community, and the government itself.

This research model only directly tests the marketing mix on smoking behavior, not on the intention to smoke. Although it is more accurate to test the effect of the marketing mix on behavior rather than the intention to smoke, relying solely on the marketing mix is not enough to understand the driving factors of smoking behavior. For further research, other variables need to be added to the smoking behavior demarketing model, such as reference groups and smoker attitudes. These variables play an important role in encouraging people to try smoking and increasing their smoking behavior in many other studies.

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