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Forced Adoption of Innovations: The Case of Consumer Behavior with Food Warning Labels in Mexico

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Abstracts

On March 27, 2020, an amendment to the Official Mexican Standard NOM-051 was published in the Official Gazette of the Federation. The amendment addresses general labeling specifications for food and non-alcoholic beverages. The new regulation introduces three significant changes, which came into force on October 1, 2020. These are warning labeling, nutrient profile, and persuasive elements on the packaging. This study assesses the impact of the regulation on the consumer at three levels: the extent to which consumers understand the five labels, their perception of the image of the product categories and companies, and the potential for shifts in consumption patterns. Similar regulations have been implemented in some other Latin American countries, such as Chile and Ecuador, but the results thus far are inconclusive concerning the actual impact of a long-term change in consumer behavior. With respect to studies conducted in Mexico, this research represents a pioneering investigation into the subject matter. A survey comprising 14 questions was administered, to elucidate the respondents' perceptions and attitudes. The survey was conducted online through convenience sampling with the Google Forms tool. The study was conducted on a sample of 210 individuals, comprising both male and female participants aged 18 and above, who were consumers of massproduced products that were subject to the provisions of NOM-051. The findings indicate that the majority of respondents lacked clarity regarding the significance of the five black labels on the packaging. Furthermore, the new regulation did not exert a considerable influence on their consumption of processed foods and non-alcoholic beverages. It is anticipated that this research will serve as a reference for companies, government entities, marketing professionals, academics, and all those with an interest in the subject, given that it demonstrates notable findings in several aspects of the regulation's implementation, slightly over a year after its enactment, and the consequences it has had on Mexican consumers and their consumption habits.

Keywords: forced innovations, warning labeling, consumer shiftings, mass consumption products, purchasing behavior, consumption habits, marketing.

Introduction

On March 27, 2020, the amendment to the Official Mexican Standard NOM-051-SCFI/SSA1-2010, which addresses the general labeling specifications for food and non-alcoholic beverages, was published in the Official Gazette of the Federation (2020). The amendment entered into force on October 1, 2020. It is recommended that supplemental nutritional information be presented using the appropriate labels (Figure 1).



Figure 1. Labels of the new NOM-051 in Mexico

Source: https://www.dof.gob.mx/

The primary objective of NOM-051 related to this matter is to define the commercial and health-related information that must be included on the packaging of prepackaged products intended for final consumers, regardless of whether they are manufactured nationally or abroad and whether they are being marketed nationally. In addition, the characteristics of this information are determined and a front-of-pack labeling system is established (García, 2020).

The new regulation introduces three significant alterations:

- 1. <u>Warning labeling</u>: The information provided is transparent and facilitates the process of making informed dietary decisions. The front labeling includes five warning labels (as previously mentioned), in addition to the precautionary legends regarding the content of sweeteners or caffeine, which are not recommended for children.
- 2. <u>Nutrient profile</u>: The objective is to collate scientific evidence on the risk of excessive consumption of sugars, fats, and sodium. The proposal was put forth by international public health experts following recommendations from the World Health Organization (WHO).
- 3. <u>Persuasive elements on packaging</u>: As of April 1, 2021, products bearing one or more warning labels or precautionary legends must not include any such information on their label:
- Children's characters
- Animations
- Cartoon
- Celebrities
- Athletes or pets
- Interactive elements (visual-spatial play or digital downloads)

The implementation phases are divided into three, commencing on October 1, 2020, and concluding on October 1, 2025. During this period, the final label will be available, providing a comprehensive profile of both added and non-added nutrients (García, 2020).

The objective of this study was to evaluate the impact of NOM-051 on the consumer at three distinct points:

- Level of consumer understanding of the new standard, mainly of the five labels
- Perception of the image of categories and companies once consumers noticed the new labeling
- Identify whether there have been shifting in consumption, what factors influence them, and in which categories

It is intended to propose a basis that will serve for future studies related to the subject.

The primary objective of this investigation is to ascertain the following:

How does the new regulation of NOM-051 affect consumer purchasing behavior?

It is of significant importance to conduct a thorough analysis of this issue in order to ascertain the impact of the new regulation on consumer behavior, to evaluate the general perception of brands with the new packaging, and to identify the categories where there have been notable changes in consumption patterns. The study is relevant for the following areas: strategic marketing, branding, advertising, product development, and packaging, primarily, as well as for all those engaged in any of the aforementioned areas, including professors, and undergraduate and graduate marketing students.

In examining the shortcomings of the study, it is evident that the impact of the ongoing pandemic was not taken into account, nor were variables that could have shed light on this issue. Furthermore, the impact of the new regulation on sales was not examined; instead, only the change in consumer perception and its potential influence on consumption habits were considered. In addition, the study only considered a limited number of categories and brands as case studies, rather than a comprehensive representation of all categories and brands that have been affected by the regulation.

Background

2.1 International Overview of Regulations on Mass Moving Consumer Goods (FMCG) and Their Impact on Consumer Perception

The initiative to regulate packaging in mass-consumption products is not a novel phenomenon in Latin America. Similar labeling has been utilized in Chile since 2016, Peru adopted it in 2019, and Uruguay, akin to Mexico, is in the implementation phase (González, 2020). The implementation of this initiative in Chile was also met with controversy, as it required brands to

alter their packaging and place large, black labels on products indicating their ingredients. Additionally, the law imposed increasingly strict regulations on advertising directed at children. The implementation of this regulation was a lengthy process that spanned over a decade and involved significant challenges, including protests in the streets and intense debates with the media, politicians, and the general public (Pardo, 2018). The objective, as articulated by Guido Girardi, a principal proponent of the legislation, was to exert pressure through the market to induce a shift towards a healthier lifestyle, characterized by a reduction in processed food and sugar consumption.

Thus far, the chamber that represents food companies in Chile, AB Chile, has not provided a definitive assessment of the law's efficacy, citing the incomplete nature of the studies on the subject. Although various surveys conducted during the initial year indicate that a majority of Chileans—between 50 and 70%—approve of the law and report changes in their habits, the concrete impact has not been fully measured (Pardo, 2018). Camila Colvarán, a researcher at the University of Chile who has examined the legislation, states that the industry has complied with the requirement to place the labels on products and that consumers can recognize the logos, particularly when purchasing a new item. Additionally, through focus groups, she has found that children advise their mothers to avoid purchasing products with labels (Pardo, 2018). Nevertheless, various experts in Chile assert that the definitive impact on consumption of these products will not be ascertained with certainty for at least eight or ten years.

It is noteworthy that the regulatory framework in Mexico underwent certain modifications in comparison to that of Chile. For instance, the term "excess of" was employed instead of "high in," which was deemed to have a more favorable connotation. Additionally, Mexico introduced five labels, whereas Chile utilized only four (Figure 2) (González, 2020). In light of these modifications to the Chilean regulatory framework, the Pan American Health Organization (PAHO) has identified the new Mexican labeling system as the most exemplary model currently in existence.



Figure 2. Labels in Chile

Source: https://www.bbc.com/mundo/noticias-america-latina-54367118

Mexico's predictions are based on the results obtained by Chile, which, although they recognize that a longer time is necessary to make evaluations of the real impact, have already identified changes in the consumption habits of its population. These include a 25% decrease in the purchase of sugary drinks, a 17% decrease in packaged desserts, and a 14% decrease in breakfast cereals (González, 2020).

As reported by Aguilar (2019), the consumption of yogurt in Chile exhibited a 10% increase in 2016 and a 6% increase in 2017, according to data from Euromonitor International. The rationale behind this was that the majority of products in this category underwent modifications to their nutritional composition, thereby enabling them to circumvent the aforementioned labels.

In Ecuador, a labeling law was approved in 2013 that requires the inclusion of a front label on packaging indicating the levels of sugars, fat, and sodium. This label employs a color-coded system, with red indicating a high content, yellow indicating a medium content, and green indicating a low content. Two years after the law's implementation, María José Troya, director of the Ecuadorian Tribune of Consumers and Users, indicated that the Nutritional Traffic Light had been met with considerable acceptance in the country, with an increasing number of individuals reporting that they consider colors when purchasing processed foods (Llorente and Cuenca, 2016). In terms of whether consumption of this type of food has decreased, there has been a decline of up to 35% in sales of products high in fat, sugar, or salt, as reported by the newspaper El Comercio de Quito. It is noteworthy that in Ecuador, the prohibition of certain advertising resources, such as images of animals, precludes the possibility of implementing a more comprehensive regulatory approach. Consequently, the labeling system, depicted in Figure 3, represents the sole available measure.



Semáforo simplificado implementado en Ecuador.

Figure 3. Labels in Ecuador

Source: https://ideas.llorenteycuenca.com/wp-content/uploads/sites/5/2016/05/160504_DI_informe_alimentacion_chile_ESP.pdf

In Peru, where warning labels were introduced in 2019, the experience of other countries was taken into account. As stated by Urpi Torrado, General Manager of the Datum Market Research Agency, the situation that occurred in Chile, where supermarkets had entire aisles dedicated to products with black octagonal labels, did not occur in Peru. Some food and beverage companies implemented solutions in their respective countries by expanding product lines that did not meet the requirements, launching new product categories, and revising formulas for existing products. Torrado also discussed the case of Coca-Cola, which had already implemented a robust media campaign for its sugar-free soft drink before the introduction of the new labeling regulations. This strategy has since been replicated in Mexico. Another illustrative case is that of the Laive

brand, which undertook a comprehensive review of its entire product range to ensure compliance with the new regulations (Aguilar, 2019).

2.2 Overview in Mexico of the new regulation on packaging for the mass consumption industry and its possible impact on consumer perception

As Suárez (2020) notes, the implementation of the Official Mexican Standard 0-51 (NOM 051) on product labeling is more rigorous for brands operating in Mexico than in other Latin American countries such as Chile and Peru. This is because the new provisions make the ingredients less appealing to consumers.

Adrián Ávalos, manager of special studies of the Worldpanel division of Kantar Mexico, stated that the new regulation on labeling is "more incisive" than the one that has been applied in various Latin American countries. The specialist highlighted that, based on international experience, the use of a word such as "excess" instead of "high" for the labeling of products can convey a more negative connotation to the consumer (Suárez, 2020). The inclusion of a legend in the new labeling in Mexico, which asks consumers to avoid consumption by children or states that the product is not recommended for minors, further exacerbates the challenges faced by Mexican brands (Figure 4).



Figure 4. Example of the new labeling on packaging in Mexico

Source: https://elpoderdelconsumidor.org/2020/05/todo-lo-que-debes-saber-sobre-el-nuevo-etiquetado-de-advertencia/

In January 2021, Yanira Reyes, the analyst leader at Nielsen Connect Mexico, stated that the impact of the new labeling had been significant. "Brands that assertively communicate healthcare, emphasizing probiotics, vitamins, and organic ingredients, have experienced

unprecedented growth" (Rodríguez, 2021). According to Reyes, the purchase of organic products exhibited a 53% annual growth rate, followed by products low in sugar, sodium, and fat, which demonstrated a 30% annual growth rate a couple of months after the new labeling came into force. Natural products exhibited a 17% increase in sales on a year-on-year basis while trending ingredients such as probiotics, proteins, matcha, and chai demonstrated a 16% growth in sales. "These products are priced at 45% above the market average, yet there is a discerning market segment willing to pay a premium for this distinct differentiation. Despite the ongoing economic downturn, Reyes (Figure 5) (Rodríguez, 2021) noted that consumers are still willing to make adjustments to their purchasing habits in order to accommodate the new labeling requirements. Furthermore, he noted that in other countries where comparable regulations were introduced, there was a decline in volume of up to 20%.

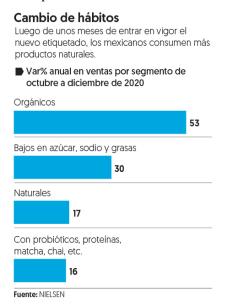


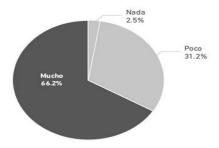
Figure 5. Infographic on the change in habits in the consumption of natural products in Mexico Source: https://alianzasalud.org.mx/2021/01/el-nuevo-etiquetado-se-lleva-la-victoria-sube-53-consumo-de-productos-organicos-en-mexico/

Literature review

- 3.1 Packaging as the main method of communication for brands
- 3.1.1 The influence of packaging on the consumer's purchase decision

Packaging serves two primary functions: to safeguard the product and to facilitate consumer engagement. It can evoke positive or negative emotions and influence consumer decision-making at the point of sale.

As indicated by the 2017 Packaging Study conducted by the Merca 2.0 research department (Jaramillo, 2017), over half of Mexican consumers assert that the impact of a product's packaging on their purchasing decisions is significant (Figure 6).



n: 637 personas encuestadas Fuente: Departamento de Investigación Merca2.0/Estudio de packaging 2017

Figure 6. Influence of packaging design on the purchase decision process of Mexicans

Source: https://www.merca20.com/como-influye-el-empaque-de-un-producto-en-la-decision-de-compra-del-mexicano/

A study conducted by the National Confederation of Industries of Brazil (CNI) revealed that 75% of companies that invested in packaging design experienced an increase in sales. The research also demonstrated that, among similar products, consumers exhibited a preference for those with the most attractive packaging, even demonstrating a willingness to try a new brand if its packaging meets this characteristic (Placencia, 2019).

The results of a representative survey conducted by Nielsen indicated that consumers exhibited a clear preference for aesthetic packaging, as well as packaging that is practical, safe, and, above all, eco-friendly (S/A, 2017).

3.1.2 Distinctive assets

Distinctive assets serve as potent branding instruments, facilitating the expeditious differentiation of a brand from its competitors. If these are developed successfully, a more coherent and unified consumer experience can be offered (S/A, 2021). Packaging represents a fundamental distinctive asset for any FMCG brand, and as such, it must be carefully crafted to contribute to a unique and strategically planned brand identity.

While there are numerous reasons why distinctive elements are important, four stand out (S/A, 2021):

- O They increase brand loyalty. Statistics show that converting a new customer is five times more expensive than keeping a current one.
- O They build trust and minimize buyer doubts. By maintaining the distinctive elements of the brand, customers will perceive a greater sense of familiarity and comfort when making a purchase, as the brand remains consistent and recognizable. Each message is perceived as part of a unified whole.

- They increase the ROI of ad spend. The brand's distinctive and unique characteristics guarantee that, regardless of the extent of consumer distraction, they will continue to successfully associate advertisements with the brand.
- They create a strong brand identity. One of the most crucial marketing objectives is the development of a distinctive brand identity.

While the primary objective of packaging is to safeguard the product's contents, it is also crucial for it to align with the brand's values and become a unique asset. This enables the creation of an emotional connection with consumers, influencing their purchasing decisions.

In consequence, the requirements of the new packaging of food products present a significant challenge for brands. In order to maintain an attractive product, brands must renew themselves, rethink their strategies, and create new ideas.

3.2 Consumer behavior

3.2.1 Factors Influencing Consumer Behavior

Consumer behavior is defined as the behavior exhibited by consumers when searching for, purchasing, utilizing, evaluating, and discarding products and services that they believe will satisfy their needs (Schiffman, 2002).

The factors that influence consumer behavior can be classified into two categories: external factors and internal factors (Schiffman & Kanuk, 2005):

- O Cultural factors. They include culture, subculture, and social classes.
- o <u>Social factors</u>. It is the influences exerted by social classes that allow comparison between groups of people.
- \circ <u>Personal factors</u>. They include age, education, stage of the life cycle, personality, and self-image.
- <u>Psychological factors</u>. They are divided into motivation, perception, learning, beliefs, and attitudes.

In order to create effective marketing plans, brands must comprehend the consumer behavior that occurs at each stage of the purchasing process and the potential influences that shape it.

3.2.2 Purchase decision process

Each act of purchase presents consumers with a multitude of variables that influence their behavior, some of which are internal and others external. In order to facilitate comprehension and analysis of these variables, the researchers identified the models as a means of linking the various variables, thereby enhancing understanding of the purchase decision process (Manzuoli, 2005).

In this article, three of the most significant models are discussed: the model proposed by Henry Assael, the model proposed by John Howard, and the Customer Journey Map (CJM).

Henry Assael's model

The model proposed by Henry Assael posits that a need, or lack thereof, serves as the initial motivating factor in consumer behavior, prompting individuals to seek out ways to fulfill that need. Subsequently, the consumer's potential initiates the processing of the sought-after information. Subsequently, the consumer executes an evaluation of the brand, makes a purchase decision, and conducts a post-purchase evaluation (Figure 7) (Manzuoli, 2005).

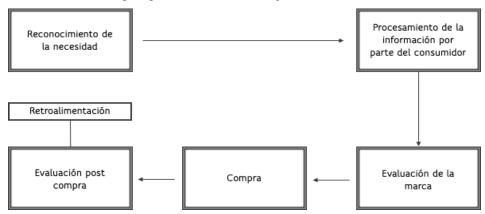


Figure 7. Henry Assael's Purchase Decision Process Model

Source: Own elaboration

John Howard's model

In his Consumer Decision Model (CDM), John Howard posits that the purchase decision process is comprised of six components (variables) and the relationships between them. The variables are as follows (Figure 8) (Manzuoli, 2005):

- o Information (F)
- o Brand Recognition (B)
- o Attitude (A)
- o Trust (C)
- o Intention (I)
- Purchase (P)

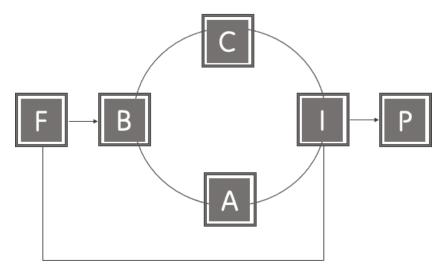


Figure 8. John Howard's Consumer Decision Process (CDM) Model

Source: Own elaboration

Customer Journey Map (CJM)

The Customer Journey Map (CJM) is a design thinking tool that proposes a methodology focused on a map delineating the various stages that consumers traverse from the moment they recognize a need until they ultimately purchase a brand (Colombo, 2019) (Figure 9).

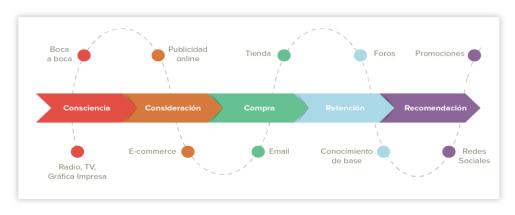


Figure 9. Customer Journey Map (CJM)

Source: https://blog.fromdoppler.com/customer-journey-map-como-crear-uno/

3.3 Brand Awareness

Brand awareness is a metric that gauges the extent to which a brand is recognized by consumers. The objective is to establish a brand's reputation, foster positive recollection among the public, and distinguish it from competitors in the marketplace (Caltabiano, 2021).

3.3.1 Positioning

Brand positioning can be defined as the set of perceptions that consumers have of a particular brand, which can be understood as the place that the brand occupies in the consumer's mind. It should result in the formation of robust collaborative relationships with customers, thereby enhancing the brand's preference over competitors (Qualtrics, 2021).

The principal elements that comprise a brand positioning strategy are as follows (Figure 10) (Duro, 2020):

- O <u>Attributes relevant to consumers</u>. You must be clear about what the buyer persona wants, including the attributes they need.
- o <u>Differentiation from the competition</u>. In-depth knowledge of the target audience is essential to find what makes one brand different from another.
- O Time of use of the product and choice of market. The choice of the market niche in which the brand is to be positioned is part of its differences from other brands in the same sector. This specialization leads to being able to recommend the use of the product or service at a certain time in the customer's life.
- O Associate the brand with certain values and feelings. The brand endures and a good positioning makes the evolution as such adapts to social changes and the new needs of consumers. The idea is to get the user community to associate the brand with certain values and link them with positive emotions.
- Ommunication of the physical and emotional attributes of the brand. Not only the physical qualities of the products determine the brand positioning, but also the emotions that are to be aroused in consumers. These are what make a brand last and those that facilitate the scalability of the business, because they are the basis for generating trust and credibility in the target audience.
- O <u>Sale of products associated with the brand's values</u>. The consistency of brand positioning ends with the products that are offered. They are the first thing consumers see, it is necessary to think about whether they represent the values of the brand, generate the benefit that the customer needs, move the emotions that they want to transmit, and have the physical attributes that define the brand.



Figure 10. Keys to a brand positioning strategy
Source: https://soniadurolimia.com/posicionamiento-de-marca/

Pirámide del Posicionamiento de Marca



Figure 11. Brand positioning pyramid

Source: https://soniadurolimia.com/posicionamiento-de-marca/

3.3.2 Brand Value

The term "brand equity" is used to describe the strength of a brand based on the financial assets involved. It is the value, whether positive or negative, that a product has acquired over its period of market availability, based on the perceptions of users. This value has a direct relationship with the company's value proposition and with the experience of consumers with it. It is the intangible, differentiating effect that provides a competitive advantage and motivates consumers to prefer one product over others (Cárdenas, 2019).

Interbrand's Brand Valuation Methodology

Many companies measure brand equity, including Interbrand, which was a pioneer in brand valuation during the 1980s. The company is credited with developing a distinctive methodology that has gained global recognition (Rocha, 2013).

The brand valuation methodology developed by Interbrand is designed to consider the perspectives of all stakeholders and the various brand drivers. The objective of brand analysis is to comprehend the influence of a brand on consumer behavior and the generation of demand (Rocha, 2013).



Figure 12. Brand value chain

Source: https://issuu.com/interbrand/docs/valoraci n de marca

All Interbrand reviews are comprised of three fundamental elements:

- 1. Analysis of the financial performance of the brand's products
- 2. Analysis of the role that the brand plays in the purchase decision
- 3. Analysis of the brand's competitive capacity

These are preceded by a segmentation criterion, and at the end of the process, they are put together to calculate the financial value of the brand (Figure 13).

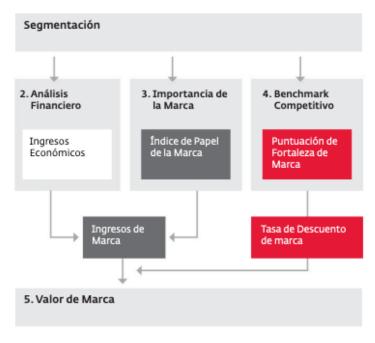


Figure 13. Brand Valuation Methodology

Source: https://issuu.com/interbrand/docs/valoraci__n_de_marca

Theoretical Framework

In the preceding sections, the theoretical framework has been elucidated through an examination of the pertinent literature on the redesign of the image of mass-consumption brands and the principal factors influencing it:

principal factors influencing it.				
Theme	Factors	Sources		
Packaging as the main method	The influence of packaging on the consumer's •	Jaramillo, 2017: Online		
of communication for brands	purchase decision	Placencia, 2019: Online		
	Distinctive assets •	S/A, 2021: Online		
		S/A, 2017: Online		

Consumer behavior	Factors that influence behavior	•	Caltabiano, 2020: Online
	Cultural	-	Colombo, 2019: Online
	Social	-	Hardcore, 2020: Online
	Personal	-	Escalante, 2016: Online
	Psychological	-	Manzuoli, 2005: Electronic Journal
	Purchase decision process	•	Schiffman, 2002: Prentice Hall
	Henry Assael's model	-	Schiffman y Kanuk, (2005):
	John Howard's model	-	Prentice Hall
	Customer Journey Map	-	
Brand Awareness	Positioning	•	Cardenas, 2019: Online
	Keys to creating a brand positioning strategy	-	Rocha, 2013: Online
	Brand Value	•	
	Interbrand's Brand Equity Methodology	-	

Methodology

5.1 Research Question

To answer the research question, "How does the new NOM-051 regulation affect consumer purchasing behavior?", a quantifiable qualitative research design was defined using a survey.

5.2 Research Design, Sampling and Data Collection

An online survey was conducted using convenience sampling (non-probability) with the Google Forms tool. The survey was conducted among 210 people, men and women over the age of 18, consumers of mass-market products affected by NOM-051 during the summer of 2023.

5.2.1 Survey Design

The survey consisted of 14 questions related to the research question and the three levels previously mentioned in the study objective.



Figure 14. Nom-051 Survey on Food and Non-Alcoholic Beverages Labeling Source: Own elaboration, 2021



Figure 15. Survey results Nom-051 (Own elaboration, 2021)

Results

6.1 Findings of the analysis

Of the 210 surveys submitted, the age groups that responded were as follows, with a preponderance of 18–25-year-olds (42.9%), followed by those 41 and older (21%). The age group with the fewest responses was 31 to 35 years old, with only 5.2% of the total responses to the survey:

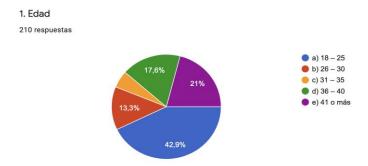


Figure 16. Question about Age

Source: Own elaboration, 2021

131 (62.4%) were answered by women and 79 (37.6%) by men:

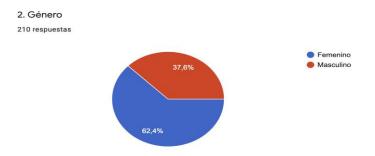


Figure 17. Question about Gender

Source: Own elaboration, 2021

92.4% of respondents indicated that they are aware of the new NOM-051 regulation:

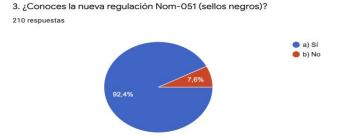


Figure 18. Question on knowledge of Nom-051

Source: Own elaboration, 2021

Only 28.6% of respondents are completely sure what the 5 black labels on the packaging mean:

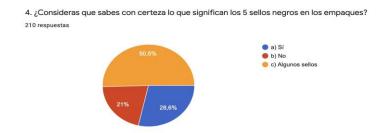


Figure 19. Question on knowledge of the meaning of the 5 labels of Nom-051

Source: Own elaboration, 2021

When asked if the new regulation has affected the respondents' consumption of processed foods and soft drinks, 76 people (36.2%) said that it has not, while 17 people (8.1%) said that it has:

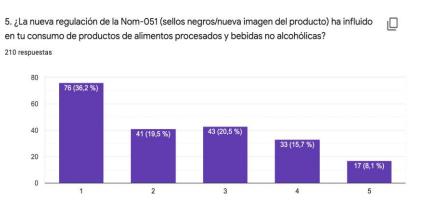


Figure 20. Question about the influence of Nom-051 on the consumption of food and non-alcoholic beverages

Source: Own elaboration, 2021

105 people (50%) said they would stop buying a product if it had 5 labels, 41 people (19.5%) said they would stop buying it if it had 4 labels, and 42 people (20%) said they would stop buying it if it had 3 labels:

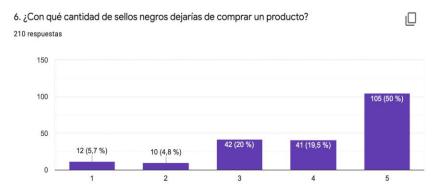
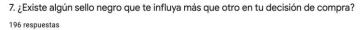


Figure 21. Question about the number of labels by which they would stop buying a product

Source: Own elaboration, 2021

The label that has the greatest influence on respondents' purchasing decisions is the excess saturated fat label, while the least influence is the excess sodium label (only 196 of the 210

respondents answered this question, taking into account that some of them had previously answered that the labels did not influence their purchasing decisions):



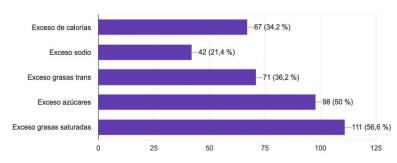


Figure 22. Question about if there is any label that influences the purchase decision more than another

Source: Own elaboration, 2021

When asked if respondents stopped buying a product because it had a Black Label, would they replace it with another product that had fewer labels or was healthier (shifting consumption), 72 people (35%) said always, 75 people (36.4%) said sometimes, and 59 people (28.6%) said never:

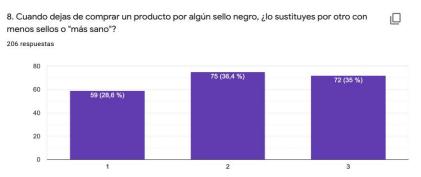


Figure 23. Question about Shifting consumption

Source: Own elaboration, 2021

The products (categories) that respondents say most influence their purchasing decisions are salty snacks, such as potatoes and peanuts, and sweets, such as candy, chocolate, and chewing gum, both ranked first with 78 people (38%). The least affected category is dairy products, with 46 people (22.4%):

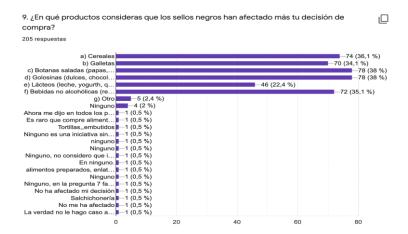


Figure 24. Question about the products that were most affected by black labels

Source: Own elaboration, 2021

Specifically, the products and/or brands that have been affected in the purchase decision of the respondents due to the black labels are prepared and canned foods, sausages, ham, bacon, tortillas, sausages, and Campbell creams. A part of the respondents answered that the Black Labels have not influenced their purchasing decisions, one of the answers obtained is quoted: "The initiative does not make sense, it does not change consumption habits":

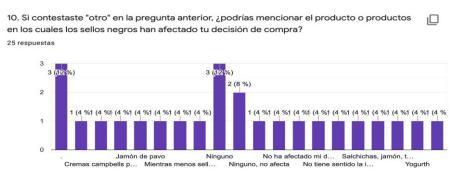


Figure 25. Question about specific products that were most affected by black labels

Source: Own elaboration, 2021

Most respondents, 128 (61%), said that their perception of the image of certain brands has not changed because of black labels:

11. ¿Consideras que ha cambiado tu percepción de la imagen de ciertas marcas debido a los sellos negros/nueva imagen del producto?

● a) Si ● b) No

210 respuestas

Figure 26. Question about change in perception in the image of products/brands due to black labels

Source: Own elaboration, 2021

For those who responded that their perception of certain products has changed, these are the products/brands they mentioned: Kellogg's, Sabritas, bars, cereals and beverages, Smuckers, Stevia chocolates, Sanisimo, Nopalia, Libanius Arabic bread, Salma's toast, Susalia, Nestlé, Bimbo, among others:

12. Si respondiste que si, podrías mencionar una o algunas marcas en las que ha cambiado tu percepción: 76 respuestas Chocolates con Stevia, Mermelada St. Dalfour, Aceirunas negras Pearls Hot cakes v pan de caja Smuckers Sanisimo. Nopalia. Frijoles enlatados. Pan arabe Libanius Tostadas Salmas o ese tipo de tostadas supuestamente bajas en calorías y al final obtuvieron varios sellos Todas en general En general todo lo que tenga exceso de azúcar y grasas trans Sabritas Nopalia, Nutella, Bimbo y en general cualquiera que contenga edulcorantes Habaneras, Pan integral Bimbo, Kellogs, Yogurth de todos los sabores de LALA Es que hay muchas marcas que se venden como sanas pero los sellos dicen otra cosa y eso me hace tener menos confianza de las marcas Oreo, Tia Rosa, Milpa Real Incoherencia en comunicación de productos sanos que realmente no son Dulces de chile en gral por su exceso de azúcares Las sopas Knor

Figure 27. Question about mentioned products/brands

Source: Own elaboration, 2021

When asked whether respondents would change their purchase decision if they were buying for someone else, 74 (35.6%) said always, 63 (30.3%) said sometimes, and 71 (34.1%) said no:

13. ¿Consideras que si compras para alguien más (hijo (a), esposo (a), mamá, hermano (a), etc.) tu decisión de compra cambia con respecto a los sellos negros?
208 respuestas

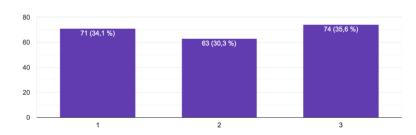


Figure 28. Question about the impact on someone else's purchase decision due to black labels

Source: Own elaboration, 2021

In the final question of the survey, whether respondents believe that black brands influence people's purchasing decisions in general, 56 (26.7%) answered sometimes, while 37 (17.6%) answered no and 29 (13.8%) answered yes:

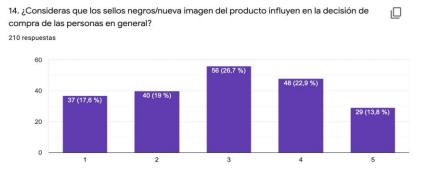


Figure 29. Question about the influence on people's purchase decisions in general due to black labels

Source: Own elaboration, 2021

6.2 Discussion of Findings

Among the results obtained, two of the most interesting findings are that, although NOM-051 has been much more stringent in Mexico than in other countries in Latin America where similar measures have been implemented, only 28.6% of respondents know with absolute certainty what the five black labels on the packaging mean, and only 17 people (8.1%) responded that the new

regulation has influenced their consumption of processed foods and soft drinks, which provides relevant insights for the way and strategy in which the standard has been communicated to the Mexican consumer.

Regarding the influence of the number of labels on the packaging to stop buying a product, only if the product had the five labels required by the standard, 50% of the respondents would stop buying it, which is directly related to the findings mentioned above: consumers do not stop buying the product with one, two or three labels because they do not know for sure what they mean or simply because they do not find them relevant, and most of them have not been influenced by the fact that the products have some black labels have influenced their purchasing behavior.

In terms of shifting, the results show that it is moderate to frequent, i.e. over 70% of respondents try to substitute a product with "many" labels for another with "fewer" labels, and among the categories most affected by the scheme in terms of purchasing decisions are salty snacks and confectionery, with dairy products being the least affected category.

In line with most of the above findings, 61% of respondents feel that their perception of brand image has not changed as a result of black labels, a very important finding for those companies who are particularly concerned about the potential impact on their brand image, which the study shows has not been as radical as it could have been.

The study yielded true and significant results, taking into account the dissonance that exists between what consumers think, say, and ultimately do within their consumer journey.

Conclusions

7.1 Implications

The entry into force of the new NOM-051, with the main changes in the packaging of mass consumption products: warning labels, and the disappearance of persuasive elements, presented a major challenge for the vast majority of brands belonging to this industry in Mexico.

After several months of implementation of this standard, it was decided to analyze consumer behavior, ranging from the level of understanding of the five labels that are already observed on most of the packaging of different products and brands, through the consumer perception regarding the image of the products, to the identification of changes in consumer purchasing behavior, in which categories these changes were most noticeable and if there were shifts in consumption.

The results showed that there has been a discreet change in the behavior of some Mexican consumers concerning the entry into force of the new NOM-051, without being as worrying as initially thought. In comparison, and as in other countries where similar regulations have been implemented, it shows once again that over time, the labels become commonplace in the eyes of the consumer and, specifically in the case of Mexico, there is not enough knowledge on the part of the consumer as to what the black labels on the packaging communicate, so many have not changed their buying behavior.

As has happened in other countries, it will be necessary to wait longer and carry out more studies in order to see tangible results as to whether the implementation of this type of measure achieves its objective or not, especially in terms of changing the purchasing behavior of consumers in the long term and a real and significant change in the consumption habits of the majority of the population. which, so far and according to the results of this study, has not occurred in our country.

It is expected that this research will serve as a reference for companies, governments, marketing specialists, academics, and all those interested in the subject since it shows remarkable results in several aspects of the application of the regulation, in a little more than a year after its entry into force, and the consequences that it has had on Mexican consumers and their consumption habits.

7.2 Constraints and Opportunities

The objective of this study was to conduct a comprehensive investigation encompassing a representative sample of men and women aged 18 and above, irrespective of their life cycle or socioeconomic status. It is recommended that future research consider segmenting the study groups according to the variables, as this would facilitate the acquisition of results pertaining to more narrowly defined groups. These could include consumers without children, consumers with young children, consumers with older children, and consumers from different socioeconomic levels. Additionally, it would be beneficial to examine the perceptions and purchasing behaviors of these groups for NOM-051. Furthermore, it would be beneficial to ascertain the long-term impact of the regulation, ensuring its efficacy over time.

Another avenue for further research would be to examine the issue from the perspective of companies and brands of mass-market non-alcoholic beverages. It would be valuable to understand their efforts in implementing the regulatory changes, including any adjustments to the packaging and the potential impact on the nutritional profiles of their products. Additionally, it would be insightful to analyze their communication and advertising strategies in response to the new regulation.

Ultimately, there is a significant opportunity for improvement in the manner in which the standard is communicated to the Mexican consumer. It would be prudent to reconsider the communication strategy with the aim of fostering a deeper and more comprehensive understanding of the five labels and their direct implications for public health.

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