



THE FACTORS INFLUENCING CONSUMER CHOICE

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Abstract: *The purpose of this article is to investigate which part of the packaging information plays an important role in consumer choice between both Generation Z and Generation Millennials. How inflation changes consumer demand for groceries. The comparative analysis between the two generations is of interest because the market is currently accustomed to the demands of the Millennial generation. It is yet to adapt to Generation Z as well. The benchmarking was done through an online survey distributed in major cities and among highly educated consumers.*

Keywords: *food products, the package, generation Z, Millennial generation inflation*

JEL: *M31*

1. Introduction

The future purchasing power lies in the hands of the Millennials and Generation Z. Both these generations represent massive commerce opportunities for many brands, owing to their high buying power, spending power, and brand loyalty. The purpose of this article is to examine their consumer habits.

The purpose of this article is to examine their consumer habits and determine what information needs when buying fast-moving consumer goods. How inflation changes consumer demand for groceries. According to the GFC report (2023), inflation in the prices of fast-moving goods in Bulgaria last year jumped by 12%. As a result of inflation, we have reduced consumer demand for food products by 10% in the middle price range. Millennials are more affected by inflation than Generation Z.

The hypothesis 1: Generation Z likes information presented with icons, emoticons and infographics or QR code, compared to millennials.

The hypothesis2: Millennials prefer the information on the label to be presented in numbers.

2. The importance of food packaging information

The meaning of the label might carry only the brand name or a great deal of information (Kotler, 2001). When purchasing food, labels are one way to communicate sustainability features of a food product to the consumer. According to the FDA (1998), a label should



clearly and minimally state the name of the product, the net weight, the nutrition facts panel (nutritional label), the name and address of the manufacturer, and the brand name. These food labels have become increasingly complex, particularly as products move from the status of basic commodities to highly processed, value-added products (APO, 2002).

In recent decades, various nutrition label formats have been introduced (Kanter et al., 2018). These differ in several respects: the types of nutrients on which they focus (e.g., highlighting only critical nutrients or also considering health-promoting nutrients), the kind of presentation/design features they use (e.g., using numbers, colour codes, shapes, or letters), and how directive they are (Hodkins et al., 2009). The mandatory nutrition facts table on the back of the package can be considered a nondirective label because it provides detailed numerical information about the nutritional components of a product without explicitly evaluating the product’s healthiness.

Figure1. Example of the mandatory nutrition facts table

Nutrition Facts	
Valeur nutritive	
Per 1 cup (250 mL) pour 1 tasse (250 mL)	
Calories 110	% Daily Value*
	% valeur quotidienne*
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
Carbohydrate / Glucides 26 g	
Fibre / Fibres 0 g	0 %
Sugars / Sucres 22 g	22 %
Protein / Protéines 2 g	
Cholesterol / Cholestérol 0 mg	
Sodium 0 mg	0 %
Potassium 450 mg	10 %
Calcium 30 mg	2 %
Iron / Fer 0 mg	0 %

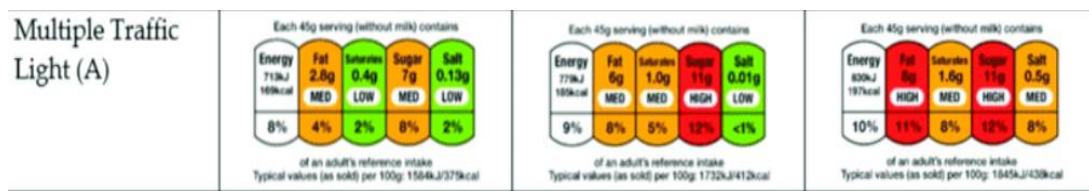
*5% or less is a little, 15% or more is a lot
*5% ou moins c'est peu, 15% ou plus c'est beaucoup

Figure 1 shows the traditional labeling of products in Bulgaria. Providing information in this way has a number of difficulties to be read by users who are not specialists in the field of dietetics. The font is not always clear and legible, this also leads to problems with interpreting the information. The majority of food products are impulse goods, where a purchase decision is made quickly and the difficulty of reading information leads to a more difficult purchase decision.

Another way to make the information easier to read is to present the information with different infographics. For the first time, the multiple traffic light is presented in the UK, as 69% of the English are overweight and the Food Agency of the UK is preparing this methodology in order to better inform consumer choices.

Semi directive nutrition labels, such as the multiple traffic light (MTL) signpost, use visual cues such as colour codes or symbols to communicate an evaluation of the product’s critical nutrient content. On the MTL label, each nutrient attribute (the amount of fat, saturated fatty acids, sugar, and salt/sodium) is represented by a separate symbol that indicates whether the amount is low (green), medium (amber), or high (red). These labels do not provide a global evaluation of the product’s healthiness. Directive labels, by contrast, provide a summary evaluation of the healthiness of a product without any detailed information.

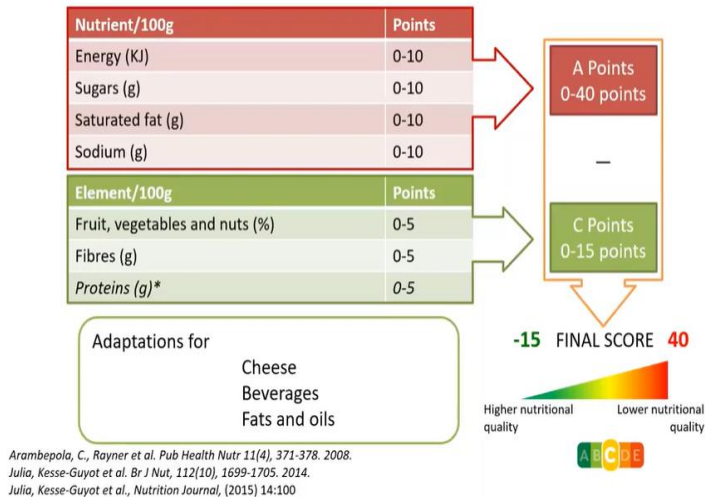
Figure .2. Multiple traffic light



According to Epidemiological nutrition research, healthy diets contain plenty of fruit, vegetables, fibre, plant-based sources of fat and protein, and low amounts of fat, saturated fat, total sugar, and salt, among others (Willett & Stampfer, 2013). A relatively new method, nutrient profiling (NP), enables the evaluation and ranking of food products according to the healthiness of their nutritional composition (WHO, 2017). Various NP models exist, such as the Ofcom/FSA NP model (Food Standards Agency, 2011) and the Health Canada Surveillance Tool (HCST) tier system (Health Canada, 2014). Each of these models includes a different number of health-relevant nutrients and serves as a basis for the classification schemes on nutrition labels and the determination of food-related health taxes (Rayner, 2017). Currently, there is no consensus regarding which model should be considered the gold standard for objectively defining the healthiness of foods (Poon et al., 2018). However, the Ofcom/FSA NP model is one of the most well-known and well-validated models (Rayner, 2017), and it is considered the gold standard by a growing number of countries and food producers, which are introducing the Nutri-Score (the label based on this model) to communicate the healthiness of products to consumers in a simple way.

Figure 3. Nutrient profiling system

Nutrient profiling system : FSA/ofcom score



Nutri-Score is a science-based, front-of-pack food labeling system that allows consumers to make informed nutritional choices. The creators of the Nutri-Score system are a scientific team from France and Germany. On the French side, the system was developed by the National Institute for Health, Food and Environmental Research (INRAE) and the Scientific and Technical Committee for Food Products (Scientific and Technical Committee for Food - CSTA). On the German side, the development of the system was led by the University of Bonn and the Max Planck Institute for Nutritional Research.

Nutri-Score classifies food products in terms of nutritional profile based on the balance of ingredients, labeling them with colors: green to red and letter A to E. Green and letter A products are of high nutritional value, which are good to consume more often or in larger quantities, and those marked with red and the letter E have a higher content of ingredients that should be limited in the daily diet (e.g. saturated fat, sugar, salt), which is why they should be consumed less often or in smaller quantities.

Figure 4. Nutri-Score



There are no widely accepted theoretical or empirical guidelines for evaluating the factors that influence the willingness to pay for nutritional labeling on food items (Nayga, 1996). However, Guthrie et al., (1995) and Nayga (1996).

The information provided by nutrition labels as a commodity, which consumers will continue to make use of as long as the benefits surpass the costs of label usage. This methodology initially proposed by Stigler (1961), specifically models the consumer's search for information which itself has been shown to be influenced by individual characteristics and many other characteristics. Working within this classification system, nutrition label use was modeled as a function of several major categories of variables including individual characteristics such as sex, age, education, household size, special diet status and monthly income.

Govindasamy and Italia and Beus and Dunlap (1992) have concluded that females are more likely to use nutritional labelling than males and have shown that sex play a major role in buying behaviour. Age is found to be significantly influencing the use of nutritional labelling where younger individuals are more likely to use nutritional labels than older individuals.

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Research shows when purchasing food, consumers are influenced by front-of-pack (FOP) labelling (Shangguan et al., 2019). Generally, a lot of research in the field of sustainability labelling already exists (Osman and Thornton, 2019; Bauw et al., 2021; Biasini et al., 2021; Torma and Thøgersen, 2021). Studies demonstrate that consumers better understand interpretative labels than, for example, the nutrition fact panel as a back-of-pack label. Reasons are the inconspicuous placement on the back and difficulties to interpret numerical information (Maubach et al., 2014). Therefore, FOP labelling is a more effective tool to draw attention to information (Bix et al., 2015). In the context of healthy diet, inter pretative labels provide an overall evaluation of the healthiness of foods. They can be divided into two types (1) nutrient-specific indicators (e.g., low in sugar): and (2) summary indicators (e.g., Nutri-Score)



3. Results

The obtained results of the study confirm the hypothesis and the two hypotheses of the study. Influenced by social media, a generation likes information presented with icons and color to a greater extent while a generation likes the text on the packaging.

An online questionnaire was conducted in Sofia and Varna in autumn 2022. To ensure data quality, two quality control tasks were included. If participants incorrectly answered these tasks, they were directly excluded from the survey. 1260 participants took part in the study. 800 were women and 600 were men. 3 of them were excluded from the dataset due to rapid response behaviour (faster than ½ of the median response time). Half of the participants were generation z and the other half were generation Millennials. The sample size required to detect small effects (Cohen’s $f = 0.10$) was calculated. Given an alpha level of 0.05 and a power of 0.80, a minimum sample of 240 participants per condition was needed (Cohen, 1988).

In the beginning of the questionnaire, sociodemographic characteristics, and statements about food labels had to be answered. In hypothetical decision situations, participants do not face any consequences for their decisions. Thus, participants were motivated to respond as honestly and realistically as possible (Lusk, 2003; van Loo et al., 2014).

Table 1 Demographic characteristic generation Z

	N	Nutri - Score	Nutrient profiling system	Nutrition facts table	Multiple traffic light
Responded in the marketing survey	600	310	101	94	89
Unrealistic response time	3	1	2	3	0
Inconsistent responses	3	2	1	0	0
Final sample	554				
Males	250	45.3	44.1	45.8	51.5
Females	304	54.7	55.9	54.2	48.5



Educational level					
Low %	10%	4.9	3.9	3.8	5.8
Medium %	30%	55.9	55.9	57.3	49.6
High %	60%	39.2	40.2	38.9	44.6

Table 2 shows the demographic characteristics of the Millennials generation

	N	Nutri - Score	Nutrient profiling system	Nutrition facts table	Multiple traffic light
Responded in the marketing survey	600	150	101	94	255
Unrealistic response time	1	1	0	0	0
Inconsistent responses	1	1	0	0	0
Final sample	554				
Males	250	45.3	44.1	45.8	51.6
Females	304	54.7	55.9	54.2	48.6
Educational level					
Low %	10%	4.9	3.9	3.8	5.8
Medium %	30%	55.9	55.9	57.3	49.6
High %	60%	39.2	40.2	38.9	44.6

Participants had to compare the different forms of presenting information on the label and determine which of the information was important to them. The first package information was presented in nutrition facts table. The second package was given information about the product in the form - Multiple traffic light. The fourth packet of biscuits the information was presented in the form of Nutrient profiling system. The fifth packet of biscuits the information was presented in the form of Nutri-Score.

From the research we can draw the following conclusions: Generation Z likes the information presented through Nutri-Score. The reasons for this lie in the easier interpretation of the information. 70% of them read the information on the packaging very often. There is a direct correlation between education level and reading label information. People with higher education are more interested in the information on the label. People with a higher degree of Gen Z are interested in eco-packaging to a greater extent and their thinking is directed towards protecting the environment compared to Millennials.

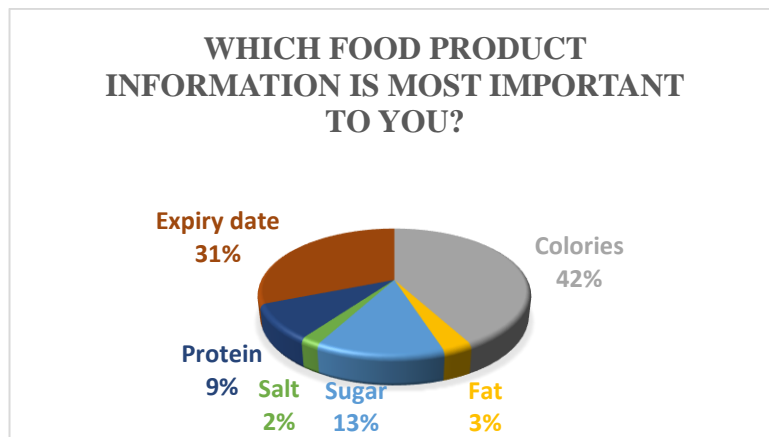


Figure 5. The important information on the label for the generations Z

For Generation Z, the most important information is calories of the products, this is due to the fact that the majority of them put the quality of food and the quality of life as one of their first priorities. Next is the shelf life of the food followed by the amount of sugar in the products. They like the information to be presented in color using infographics which confirms the main thesis of the article.

Generation Millennials are consumers with more stable incomes than Generation Z, have longer shopping experience and a greater shopping routine. This is also due to the fact that they read the information on the packaging less. Skeptical of the quality of the presentation of information

and treat it with distrust to a large extent. This is due to the negative shopping experience they had. Of the listed ways of presenting information, they like Multiple traffic light the most. They like Multiple traffic light better because they also have a quantitative expression of the numbers.

Generation Millennials mostly like the digital image of information, they find information more credible when it has a quantitative expression. They are less concerned about environmental protection. The influence of eco-coatings affects them to a lesser extent in consumer choice. The most important information on the package is the expiration date of the product and then the calorie content of the product. Millennials prefer label information to be delivered digitally rather than infographics

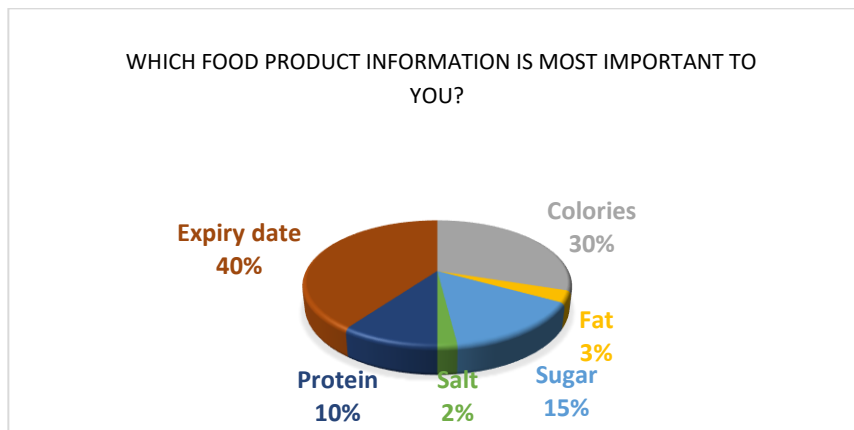


Figure 6. The important information on the label for the Millennials generations

Table 3 shows the aggregated results of all research participants on how they rate voluntary consumer information systems.

Table 3 analysis of the perceived usefulness of different types of nutrition information.

Type of information	All [N = 1200]
	M (SD)
MTL	5.42 (1.51)
Nutri-Score	4.72 (1.76)
Nutrition facts table	5.26 (1.49)
Nutrition facts table	5.27 (1.47)



The summary evaluation, it can be seen that Multiple traffic light is liked more than Nutri Skora. This is due to the fact that it contains both digital and color information. Participants in the marketing research used the scale for assessing perceived usefulness ranged from 1 ('not at all useful') to 7 ('very useful').

5. Conclusion

Voluntary rating systems are not widely used in the Bulgarian market. But the consumer accepts them positively their introduction to the grocery market. Generation Z prefers colorful presentation of information and with infographics. Because this generation has lived with and influenced by social media for most of their lives, they like this way of presenting information. While the Millennial generation likes the digital presentation of information. The two generations differ in the way they make a purchase decision. As Gen Z, grocery choices are influenced by calories, and millennials are influenced by expiration dates. Inflation has affected both generations and they have shrunk their consumer demand.

The millennial generation is more sensitive to inflationary processes. Their rate of contraction of consumer demand is up to 15%. Generation Z have shrunk their consumer demand by 10%.

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