

Protein source or its value? Consumers' perception of the importance of attributes of meat(-like) product

Marcin Antoniak, Andrzej Szymkowiak

Department of Commerce and Marketing, Institute of Marketing, Poznań University of Economics and Business, Poznań, Poland

Introduction: As omnivores, humans need a wide variety of nutrients in their diets. One of the most important are proteins delivered, among others from meat. However, according to some researchers, limiting meat consumption (Elzerman et al., 2013; Szejda et al., 2020) e.g. by replacing it with analogs (Schösler et al., 2012), may be crucial in the context of human health or ecology. One of the relatively popular meat substitutes are vegetable proteins. However, many consumers believe that a plant-based diet may not be nutritious enough (Lea & Worsley, 2001). Therefore, consumers are often reluctant to switch to this type of food (Lea et al., 2006a, 2006b). To better understand the perception of meat and its analogues, the authors decided to investigate two products - meat-based and plant-based. Their aim was to determine what is more important to consumers - whether product contains high level of protein, the origin of the protein (meat vs plants), or both. Understanding consumer perceptions and willingness to consume such products is the main contribution of this paper, especially in the context of food product design and labeling.

Materials and methods: For the purposes of the study, 4 versions of product packaging were prepared. They differed in the information presented on the front label: source of origin (plant- vs meat-based) and the optional presence of the „high-protein” Nutrition Claim. The research was conducted through Amazon Mechanical Turk. Participants were asked to answer a number of questions based on a 7-point scale (1 - strongly disagree, 7 - strongly agree). The questions concerned the willingness to consume and the assessment of the perception of product attributes: environmentally friendly, natural, high quality, healthy. The data collected in the experiment formed the basis for the ANOVA 2x2 analysis.

Results: The studied group included mainly people with medium and high meat consumption (Mean = 4.63; SD = 1.59). The source of protein (plant vs animal) appeared to differentiate consumers' perception of the product as more eco-friendly ($F(1, 518) = 38.681, p < 0.001, \eta^2 = 0.069$), natural ($F(1, 518) = 15.518, p < 0.001, \eta^2 = 0.029$) and healthy ($F(1, 518) = 25.76, p < 0.001, \eta^2 = 0.047$). Additionally, labelling the product with the „high-protein” Nutrition Claim differentiated consumers' willingness to consume it ($F(1, 518) = 12.24, p = 0.034, \eta^2 = 0.009$), and the perception of the product as more environmentally friendly ($F(1, 518) = 6.65, p = 0.01, \eta^2 = 0.012$) and of higher quality ($F(1, 518) = 7.28, p = 0.007, \eta^2 = 0.014$).

Discussion and Conclusions: The obtained results may have theoretical significance through a better understanding of the factors determining the perception of food products and the use of meat substitutes. They may also be an important source of information for business practitioners, showing that for the products tested, the source of the protein is not of great importance to consumers.

The authors are aware of certain research limitations. The study was aimed at identifying the influence of the analyzed factors under ceteris paribus conditions. The omitted variable that may be an element of further research is, inter alia, product price. It would also be worth carrying out similar studies in countries with lower meat consumption and different environmental sensitivity of consumers. Additionally, it is worth considering examining the level of food neophobia as a moderating variable

References:

- Elzerman, J. E., van Boekel, M. A. J. S., & Luning, P. A. (2013). Exploring meat substitutes: Consumer experiences and contextual factors. *British Food Journal*, 115(5), 700-710. <https://doi.org/10.1108/00070701311331490>
- Lea, E. J., Crawford, D., & Worsley, A. (2006a). Consumers' readiness to eat a plant-based diet. *European Journal of Clinical Nutrition*, 60(3), 342-351. <https://doi.org/10.1038/sj.ejcn.1602320>
- Lea, E. J., Crawford, D., & Worsley, A. (2006b). Public views of the benefits and barriers to the consumption of a plant-based diet. *European Journal of Clinical Nutrition*, 60(7), 828-837. <https://doi.org/10.1038/sj.ejcn.1602387>
- Lea, E. J., & Worsley, A. (2001). Influences on meat consumption in Australia. *Appetite*, 36(2), 127-136. <https://doi.org/10.1006/appe.2000.0386>
- Schösler, H., Boer, J. de, & Boersema, J. J. (2012). Can we cut out the meat of the dish? Constructing consumer-oriented pathways towards meat substitution. *Appetite*, 58(1), 39-47. <https://doi.org/10.1016/j.appet.2011.09.009>
- Szejda, K., Urbanovich, T., & Wilks, M. (2020). Accelerating Consumer Adoption of Plant-Based Meat: An Evidence-Based Guide for Effective Practice (pp. 1-110). The Good Food Institute.