The Impact of Moral Opposition to Tampering with Nature on Consumers' Preference for Genetically Biofortified Food in Sub-Saharan Africa

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Abstract

It remains unclear whether moral opposition to tampering with nature will significantly drive resistance from consumers as scientists push for the up scaling of genetically modified (GM) food in sub-Saharan Africa (SSA). This issue has been extensively investigated in literature focusing on developed countries. Yet, this information is largely missing in previous studies that focused on SSA. There is a consensus in certain literature that consumers are more positively disposed to GM foods that provide benefits to them justifying scientists' optimism that consumers in SSA will favor genetic biofortification of staple foods in a bid to address the problem of micronutrient deficiency. In contrast, another body of literature argued that much of consumers' resistance to GM food can be explained in human's absolute moral opposition to tampering with nature evoking insensitivity to benefits of GM food. In this study, we investigate the validity of these hypotheses in the context of SSA. Employing data from a discrete choice experiment, we modelled causality between absolute moral opposition to tampering with nature and consumers' preference for a GM beans with improved nutrient content and yield. The mediating role of consumers' objective knowledge of GM was also investigated. For our sample, we purposively target a scientific literate population of a university community in Nigeria. We estimated a latent class logit model using a total of 1512 observations generated from 168 respondents. First, we found that only 9.8 % of the sample manifested absolute moral opposition towards GM food. Further, the results reveal three segments of respondents with heterogeneous utility weights for nutrient content and yield attributes. Absolute moral opposition and objective knowledge towards GM food predicted consumers' probability of class assignment. Overall, the results show that, in this population, consumers' preference for GM food is mainly driven by knowledge of the objective purpose of GM and whether the GM application significantly improved nutrient density in a cost-effective way. Since our aim here was to provide evidence for what might be expected in a larger population of consumers, we call for further testing of these hypotheses among a less literate population of consumers.

Keywords: Biofortification, choice experiment, genetic modification, moral opposition, preference

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