



Organic Consumption: The Influence of Risk Perception, Efficacy, and Product Types

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The market for organic products has been growing, and it broke the \$55 billion sales mark in 2019. While Organic food is the majority, at \$50.1 billion, non-food sales also hit a little over \$5 billion (OTA, n.d.). Growing consumers' interests in health and environmental protection seem to be major drivers of the market growth (Chandak et al., 2014). The organic purchasing literature has primarily been focused on normative approaches where perceptions or beliefs related to environment and health (e.g., environmental concern, beliefs) are predictive variables for organic consumption. Others also examined motivators of organic consumption from the functional value perspective, such as health concerns, food safety, and various values (e.g., Hur et al., 2013; Testa et al., 2019). Despite the growing number of organic studies in the literature, it has been criticized that the literature lacks a theoretical foundation and consistent empirical grounds to explain organic consumption (Kushwah et al., 2019). Previous studies have predominately utilized certain product categories (e.g., carrot, produce, cotton) that typically cause varying foci and variable choices (e.g., health concern or softness). As more variations of organic products appear in the market, such as cereal and skincare made with organic crops, understanding different patterns of organic consumption across products will contribute to the body of knowledge by explaining organic consumption with greater generalizability.

The purpose of this study was to investigate the differential impacts of risk perceptions associated with conventional farming and organic certification on organic consumption of various product categories. Self-efficacy was conceptualized as a mediator of the assessment of risk and organic certification. Risk represents the magnitude of harm caused by conventional farming practices, while organic certification is viewed as efficacy of organic products. These variables were drawn from the discussion of protection motivation, risk perception, and self-efficacy theories as well as empirical findings in the field. In other words, we conceptualized organic consumption as a remedial or preventive behavior in response to the environmental risks posed by conventional agriculture.

An online survey was posted on MTurk to recruit adults residing in the US. A total of 410 responses were analyzed after discarding 50 responses that indicated less than 3 minutes spent or showed invalid/missing responses. The distribution of the sample characteristics was similar to that of the U.S. adult population. The organic consumption was measured by purchase frequencies during the last year for non-food items (cotton clothing, cotton products other than clothing, and body care/ cosmetics) and the last month for food-related items (grains, produce, and meats/dairy products). All continuous variables, except the purchase frequency measures, employed 5-point Likert-type scales. The measurements were developed based on the concepts from theories and literature and how the concepts are applied to organic consumption. All measurements went through a review by experts and a pilot test to increase face validity of the

measures. The scales included in the survey achieved adequate reliabilities, .87 for magnitude of risk (3 items), .74 for organic certification (4 items), and .82 for self-efficacy (5 items).

The Baron and Kenny (1986) method was used to test mediation. This method allowed us to determine the proportions of the direct and indirect effects of the predictor variables on purchase frequency measures. The analysis indicated that purchase frequencies of all product types were strongly predicted by organic certification ($ps > .01$). However, purchase frequencies of only grain and produce were predicted by harm caused by conventional agriculture (risk perception) ($ps < .01$). The second model showed both independent variables, harm and organic certification, significantly predicted self-efficacy ($ps < .01$). When the mediator, self-efficacy, was added to the first models, the effects of organic certification decreased especially for cotton clothing, grains, and produce ($ps > .10$). Cotton products other than clothing ($p < .10$) and body care/ cosmetic products ($p < .05$) showed a decrease in significance as well yet to a lesser degree, indicating that the direct effect of organic certification was significant even with the mediator in the model. For grain and produce, the tests indicated that the mediation was significant, yet the degree of mediation for produce ($p < .05$) was lesser than that for grain products ($p > .10$).

We found that the direct impact of the risk perception was only apparent in produce purchasing although both grains and produce showed a full and partial mediations. On the other hand, purchasing most organic products other than those two product types was not influenced by the harm assessment (i.e., risk perception). The results also indicate that the organic certification has strong influences on all products, mostly through raised self-efficacy. It is important to note that both risk perception and organic certification have direct impacts on self-efficacy. The findings seem to indicate that organic certification convinces consumers of the benefits of organic production and certification, which in turn activates consumers' self-efficacy. However, actual purchasing would only occur to consumers who believe that they could make a difference. Purchasing meats/dairy did not show any mediation effect indicating that the organic certification has a direct impact on consumption.

Environmental risk is a highly discounted risk judgment due to unclear consequences. The findings seem to confirm that spatial and temporal discounting is present in consumer risk judgment of conventional agriculture, yet consumers purchase organic products largely driven by certification. The findings indicate that food/nonfood distinctions that are assumed in the literature do not apply. While meats and dairy consumption was not linked to the risk perception, products that maintain their original form as harvested (i.e., produce) and crops (minimal alterations) were. Alternatively, the fact that produce products are quickly delivered from the farmlands and other products have a longer processing and logistics process may have an influence. Further investigation manipulating the product form variations such as 'fresh' vs. 'frozen,' 'original form vs. altered form,' 'whole vs. processed,' and '100% cotton vs. blended with man-made fiber' could confirm this interpretation. Such confirmation can help researchers identify generalizable variables that impact organic consumption across products rather than variables that are specific to each product category. We contributed to the literature by addressing that the influences environmental norm on organic purchasing is different across product categories.

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