Tropentag, September 14-16, 2022, hybrid conference

"Can agroecological farming feed the world?
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Evaluation of the attractiveness of different packaging designs for child food products by Beninese customers

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Abstract

Child malnutrition is a major problem in Benin, where 31 % of children under five years suffer from stunting and 5 % from wasting. Artisanal production of affordable, tasty and nutritious child food by local women entrepreneurs could help mitigate the problem. However, minimising spoilage and keeping technophile customers on board requires appropriate, attractive packaging.

To investigate the influence of packaging design elements (attributes) and their characteristics (attribute levels) on the evaluation of packaging attractiveness by Beninese child food customers, we conducted a conjoint experiment. The experiment was embedded in an online survey, which was completed by 110 child food customers in the wider area around Parakou, North Benin, in January 2022. The attributes [colour design, background element, pictorial elements (mother; giraffe), nutritional information] and attribute levels included were derived from previous own investigations. 15 packaging designs were created (D-efficient design) and randomly displayed to participants who were asked to rate the attractiveness of each packaging design on a scale from 1 to 10.

The rating of packaging designs ranged from a mean of 5.68 (SD 2.15) for the lowest rated to 7.49 (SD 1.68) for the highest rated design. The design's influence on the evaluation of attractiveness was significant, as shown by the regression model ($R^2 = 11.8\,\%$, $p < 0.001$). The most important design element was the background element, followed by the pictorial representation of a woman and colour. Less important were the pictorial representation of a giraffe and nutritional information. Of the background attribute levels, the blackboard had the highest part-worth utility with a coefficient of 0.78. The illustration of a traditional woman generated a part worth utility of 0.47 followed by a contemporary illustration of a woman (0.39) and the base category with no illustration (0.00). Of the colour design attribute levels, a traditional reddish pattern generated the highest part-worth utility (0.46).

Our results indicate that packaging designs displaying traditional symbols might attract Beninese child food customers. However, our model only explains about 12 % of the data's variance. Further research is needed to determine other impatcs like socio-demographics' and food shopping environments'.

Keywords: Child food packaging, malnutrition Benin, parental food choices influenced by packaging

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