Estimating the Demand for Banana Ketchup in Rural and Urban Supermarkets in Davao Region, Philippines

Shemaiah Gail P. Placencia[1,*], Melissa P. Loquias[1], Shania Daryl C. Lastomen[2], Marvin Louie G. Orbeta[1], Larry N. Digal[1], and Carol Q. Balgos[1]

[1]University of the Philippines Mindanao
[2]Davao de Oro State College, Philippines

***Correspondence**

School of Management, University of the Philippines Mindanao, Mintal, Tugbok District, Davao City 8022, Philippines

E spplacencia@up.edu.ph

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Abstract

In the Philippines, the banana sector is recognized to play an important role in the economy. The country produces an average of 4.8 million metric tons of Cavendish Banana annually from 2018-2022. Fifty-three percent of this volume is produced by Region XI. Around 10 percent of the total cavendish banana produced accounts for reject or off-grade banana. One of its by-products produced from reject and surplus is banana ketchup, a cheaper and sweeter substitute to tomato ketchup. With this, this paper explores the demand for different ketchup brands in the market to better understand how efficiency is achieved and wastage is minimized in the banana value chain through demand response. An Almost Ideal Demand System model using point-of-sale data was utilized, while focusing on key performing brands. Own-price, cross-price, and expenditure elasticities across brands and across branches were also estimated to see the substitutability and market potential across different ketchup brands and variants. As expected, tomato ketchup was highly substitutable with banana ketchup. Cheaper local brands were also seen to be highly competitive compared to. Specifically, showed that UFC is most sensitive to changes in its own price, while cross-price elasticities show that Del Monte is highly substitutable to Queen, Papa, and UFC. Papa carries the highest expenditure elasticity for rural areas and Queen for urban areas. With these results, retailers may consider increasing their selling price for Papa and Queen for potentially higher revenues. Also, the competitiveness of cheaper substitutes in urban retail markets is also acknowledged, especially because of the emergence of smaller businesses which are predominant buyers of said product. Hence, it is worthwhile to support smaller processors, offering cheaper alternatives to the banana ketchup market by linking them with banana growers, and subsequently allowing them to access the supply of underutilized off-grade bananas. This will help reduce food waste by increasing the utilization off-grade bananas and help the processors access cheaper inputs to production. The feasibility of their expansion is supported by the results of the AIDS estimation.