



REVISTA AMBIENTE CONTÁBIL
Universidade Federal do Rio Grande do Norte
ISSN 2176-9036

Vol. 16, n. 2, Jul./Dez., 2024

Sites: <https://periodicos.ufrn.br/index.php/ambiente>

<http://www.atena.org.br/revista/ojs-2.2.3-06/index.php/Ambiente>

Article received in: June, 20th, 2023. Reviewed by pairs in:

October, 09th, 2023. Reformulated in: November, 02th, 2023.

Checked by the system double blind review.

DOI: 10.21680/2176-9036.2024v16n2ID36729

Identification of determining factors in formation of açai berry price from the perspective of its entrepreneurs

Identificación de factores determinantes en la formación del precio de açai desde la perspectiva de sus empresarios

Identificação dos fatores determinantes na formação do preço do açai a partir da ótica dos seus batedores

Authors

Anderson Roberto Pires e Silva

PhD in Accounting Sciences from UnB/UFPB/UFRN - Professor at School of Accounting Sciences of the Federal University of Pará (UFPA). Address: Rua Augusto Corrêa, 01, Guamá – Zip Code: 66075-110 - Belém/PA, Brazil. Telephone: (91) 98866-3696. Identifiers (ID):

ORCID: <https://orcid.org/0000-0002-1659-8153>

Research Gate: <https://www.researchgate.net/profile/Anderson-Silva-31>

Lattes: <http://lattes.cnpq.br/1945407944562693>

E-mail: andersonpires@hotmail.com

Jorge Lucas Castro Furtado

Graduated in Accounting Sciences from the Federal University of Pará (UFPA). Address: Rua Augusto Corrêa, 01, Guamá – Zip Code: 66075-110 - Belém/PA, Brazil. Telephone: (91) 98361-7313. Identifiers (ID):

ORCID: <https://orcid.org/0000-0001-9854-7853>

Lattes: <http://lattes.cnpq.br/4238495587903353>

E-mail: jorgelecfurtado@gmail.com

Elyany da Silva Amador

Graduated in Accounting from the Federal University of Pará (UFPA). Address: Rua Augusto Corrêa, 01, Guamá – Zip Code: 66075-110 - Belém/PA, Brazil. Telephone: (91) 98177-9607. Identifiers (ID):

ORCID: <https://orcid.org/0009-0002-4696-7826>

E-mail: elyanyamador@gmail.com

Márcia Athayde Moreira

PhD in Controllershship and Accounting from the University of São Paulo (USP) - Professor at School of Accounting Sciences of the Federal University of Pará (UFPA). Address: Rua

Anderson Roberto Pires e Silva, Jorge Lucas Castro Furtado, Elyany da Silva Amador and Márcia Athayde Moreira

Augusto Corrêa, 01, Guamá – Zip Code: 66075-110 - Belém/PA, Brazil. Telephone: (91) 98480-9229. Identifiers (ID):

ORCID: <https://orcid.org/0000-0003-1859-6394>

Research Gate: <https://www.researchgate.net/profile/Marcia-Moreira-7>

Lattes: <http://lattes.cnpq.br/0214030655326645>

E-mail: mathayde@ufpa.br

Abstract

Purpose: This research aims to identify the determinants factors for açai berry price liter in Belem Metropolitan Region (RMB) at Para state, Brazil, according to the perception of its entrepreneurs.

Methodology: An exploratory with a qualitative approach research, conducted through face-to-face semi-structured interviews with açai entrepreneurs, in the RMB. The collected information was treated with content analysis, using ATLAS.Ti 8 software, in three categories of analysis: determining factors for pricing based on costs; determining factors for market-based pricing; determining factors for pricing based on costs and market. From these three categories, the description of the factors and variables took place.

Results: It was concluded that açai entrepreneurs predominantly adopt strategies for price formation based on costs, as opposed to determinants based on market factors, using inadequate information and methods of price formation, based only on personal experience and perceived need, lacking training and formal education, under the study field, drawing attention support from agencies that promote entrepreneurship, and definition of public policies for development and improvement of activity of producing açai pulp in Belem and region.

Contributions of the Study: From a theoretical perspective, this research contributes to study and discussion of sales price formation approaches. As a practical contribution, this research emphasizes the açai fruit in establishments belonging to Para metropolis, favoring the development and improvement of local enterprises. Finally, given that açai is a food product of cultural and economic significance for the RMB, this research contributes socially by portraying and bringing to discussion the reality of these businesses management.

Keywords: Pricing strategies; Costs; Market; Açai berry; Metropolitan Region of Belem.

Resumen

Objetivo: Identificar los factores esenciales para la determinación del precio del litro de açai en la Región Metropolitana de Belém (RMB), según la percepción de sus empresarios.

Metodología: Investigación exploratoria, con enfoque cualitativo, realizada a través de entrevistas cara a cara semiestructuradas con batidores de açai, en la RMB. La información recolectada fue tratada con análisis de contenido, utilizando el software ATLAS.Ti 8, en tres categorías de análisis: determinantes de la fijación de precios basados en costos; factores determinantes para la fijación de precios basada en el mercado; factores determinantes para la fijación de precios en función de los costos y el mercado. A partir de estas tres categorías se procedió a la descripción de los factores y variables.

Resultados: Se concluyó que los empresarios de açai investigados adoptan predominantemente estrategias para la formación de precios que como determinantes factores vinculados a los costos, en contraposición a determinantes basados en factores de mercado, utilizando registros y métodos inadecuados de formación de precios, basados solo en la experiencia y necesidad percibida, careciendo de formación y educación formal en el área de estudio, llamando atención sobre la necesidad de apoyo organismos que promuevan emprendimiento y la definición de políticas públicas para desarrollo y mejora de la actividad de producción de pulpa de açai en Belém y región.

Contribuciones del Estudio: Bajo una perspectiva teórica, esta investigación contribuye al estudio y discusión de enfoques de formación de precios de venta. Como contribución práctica, esta investigación enfatiza fruto del açai en establecimientos pertenecientes a la metrópoli de Pará, favoreciendo desarrollo y la mejora de las empresas locales. Finalmente, dado que açai es un producto alimenticio de importancia cultural y económica para la RMB, esta investigación contribuye socialmente al retratar y traer a la discusión la realidad de la gestión de estos negocios.

Palabras clave: Estrategias de Precios; Costos; Mercado; Açai; Región Metropolitana de Belém.

Resumo

Objetivo: Identificar os fatores essenciais para a determinação do preço do litro do açai na Região Metropolitana de Belém (RMB), segundo a ótica de seus batedores.

Metodologia: Pesquisa exploratória, com abordagem qualitativa, realizada por meio de entrevistas semiestruturadas de forma presencial com batedores de açai, na RMB. As informações coletadas foram tratadas com análise de conteúdo, com a utilização do software ATLAS.Ti 8, em três categorias de análise: fatores determinantes para a precificação com base em custos; fatores determinantes para a precificação com base em mercado; fatores determinantes para a precificação com base em custos e mercado. A partir dessas três categorias ocorreu a descrição dos fatores e variáveis.

Resultados: Concluiu-se que os batedores de açai pesquisados adotam predominantemente estratégias para a formação de preço tendo como fatores determinantes ligados a custos, em contraponto aos determinantes baseados em fatores de mercado, utilizando registros e métodos de formação de preços inadequados, fundamentados apenas na experiência e necessidade percebida, carecendo de treinamento e educação formal na área em estudo, chamando atenção para necessidade de apoio por parte de órgãos de fomento ao empreendedorismo e definição de políticas públicas para desenvolvimento e aprimoramento da atividade de produção da polpa do açai em Belém e região.

Contribuições do Estudo: Sob uma ótica teórica, esta pesquisa contribui para o estudo e discussão de abordagens de formação de preço de venda. Como contribuição prática, esta pesquisa enfatiza o fruto do açai nos estabelecimentos pertencentes à metrópole paraense, favorecendo o desenvolvimento e o aperfeiçoamento dos empreendimentos locais. Por fim, dado que o açai é um produto alimentício de significância cultural e econômica para a RMB,

esta pesquisa contribui socialmente ao retratar e trazer para a discussão a realidade da gestão desses negócios.

Palavras-chave: Estratégias de Precificação; Custos; Mercado; Açaí; Região Metropolitana de Belém.

1 Introduction

Açaí, the typical fruit of an Amazonian palm tree, has gained prominence in the market in recent decades, ceasing to be a regionally consumed food and becoming increasingly demanded in both the national and international food markets. (Nogueira, Santana & Garcia, 2013). The health benefits, so widely publicized in the health food market, have made açaí a "superfruit" (Sebrae, 2015).

The sale of liters of açaí in the state of Pará is fundamental for generating employment and income for many entrepreneurs in this sector, regardless of seasonality, contributing to the local economy. However, the price of a liter of açaí undergoes significant changes over the course of a fiscal year (Leal, 2019). Açaí is a staple food for the population of Pará, and is consumed at different income levels. According to a survey by Embrapa, in 2016 the average per capita consumption in the state of Pará was 17.8 L/year, in families with an income of up to 1 minimum wage, and in the income range between 2 and 4 minimum wages, the average consumption of the family group reached 102.1 liters of açaí per year (Bezerra, Freitas & Damasceno, 2016).

The product has come to occupy a prominent place (Ribeiro, 2019) among consumers of national and international fruit pulps, but the main consumer market for açaí is still the Northern Region (Silva, 2017) and especially the state of Pará, which according to the Union of Fruit and Derivatives Industries (Leal, 2019) is the largest producer and largest consumer, accounting for around 95% of national production. In the city of Belém - PA, it was estimated that the amount of açaí consumed in 2010 was 360,000 liters per day (Farias Neto, Vasconcelos & Silva, 2010).

Currently, the açaí trade in the state of Pará is undergoing major structural changes in terms of production and consumption, both for the domestic and foreign markets (Monteiro & Azevedo, 2018). However, production capacity is becoming insufficient to meet the gradual increase in demand, so the selling price in the markets of the city of Belém is increasing considerably (Nogueira, Santana & Garcia, 2013). Through the study of açaí marketing in the state, it can be inferred that Pará has a rich resource (açaí) that provides significant regional economic maintenance and income generation for its citizens.

In a competitive market in which the same product is offered by several agents, as is the case with the açaí market, pricing becomes strategic for maintaining the enterprise (Macedo & Rosadas, 2005), requiring proper management of the entire process (Ramos, Maya & Bornia, 2005) with analysis focused on both the formation of production costs and the behavior of the consumer market (Dezordi, Vieira & Sausen, 2022). Thus, the focus of this research is on analyzing the price of a liter of açaí, given its importance in terms of generating income and cultural value for the population of the Belém Metropolitan Region (RMB).

The price of a liter of açaí became more expensive in the metropolis of Belém in 2018 (Dieese, 2019). The medium type of açaí, most consumed by the people of Pará, began the year costing an average of R\$16.41 and ended December with an average price of R\$14.80. In 2019,

the increase in the price of a liter of açaí reached 27% in the first few months. In March, the average liter of açaí sold for R\$18.11, around R\$3.30 more than it did in December 2018. This represents an accumulated price increase of 21.97% against inflation of 0.90% (Dieese, 2019).

Based on this context of frequent variations in the price of a liter of açaí, we have the following research question: **What are the determining factors in the formation of the price of a liter of açaí from the point of view of its local distributors?** The main objective of this study was to identify the key factors in determining the price of a liter of açaí in the Metropolitan Region of Belém (RMB), from the point of view of its sellers.

To complement this, it was worth highlighting the profile of the açaí mixers and characterizing the preparation and marketing establishments, drawing a correlation between the profile of these mixers and the characterization of the establishments with the factors that determine the price of a liter of açaí.

It is understood that açaí has important cultural and economic relevance in the region, given the large number of açaí outlets throughout the metropolis of Belém. In the capital alone, it is estimated that there are more than 5,000 preparation and marketing establishments (Barbosa, 2018). In the 10-year period between 2012 and 2022, there was a growth of 15,000 percentage points in the sale of the fruit, with production in 2021 being 1.5 million tons, a scenario driven by the versatility of the fruit, to which antioxidants and other characteristics are attributed, generating a leap in food businesses in which it is a protagonist, contributing to this promising scenario (Silva, 2023), thus boosting interest in research.

The study aims to reach not only the academic community, but also individuals who are part of the fruit's economic cycle, considering that it could lead to the creation of a planning and pricing guide for beaters, as well as being an instrument of inspiration for future entrepreneurs in the field, contributing to the economic development of the region. This study is also justified by the fact that we did not identify any recent studies on the subject of the factors that determine the price of a liter of açaí in the metropolis of Pará.

2 Theoretical Foundation

Proper pricing is essential for planning the business and keeping it in the market, especially when it comes to a product in a competitive market such as açaí, where there are several sellers and buyers for the same product. In this scenario, strategic cost management becomes a tool for competitive advantage, as the current environment demands relevant information relating costs, performance, processes, products, services and customers (Zart, Zart & Zanatta, 2018). It should also be noted that, if poorly defined, the price can jeopardize the continuity of the business, since it is from the price that the company's main revenue will be known, which will be responsible for covering all the operating expenses incurred (Melo, Oliveira, Souza and Savi, & Costa, 2021).

The best pricing tools have a positive impact on business performance (Santana, Silva & Gonçalves, 2017). In the view of authors such as Alves and Caetano (2016) and Buechner (2018), the critical conclusion in pricing is that prices are influenced by facts that reflect supply and demand, and are therefore objective and not the result of the wishes and desires of the supply agent. As such, any agent who sets a price must take supply and demand conditions into account in order for their pricing to be successful. However, pricing can also be approached from other aspects. In addition to the supply and demand perspective, companies can usually adopt the cost perspective, due to its ease of perception of transactions with goods and/or raw materials (Macedo & Rosadas, 2005). More broadly, price formation goes beyond the limits of

accumulating costs and analyzing expenses, and must take into account the influence of the market, the level of activity and the expected return on invested capital (Macedo, Souza, Rosadas & Almeida, 2011; Rizzi & Zanin, 2018; Pires e Silva, Santana & Gonçalves, 2019, Dezordi, Vieira & Sausen, 2022).

Because the market environment is characterized by fierce competition that leads to a reduction in profit margins, the strategies adopted in pricing can mean the survival of companies (Morais, Jardim, Silva & Alves, 2018).

2.1 Cost-Based Pricing

Managing the costs incurred throughout the production phase is an important tool for decision-making in a business. Such management is capable of enabling better visualization of the expenses incurred in the production process of a product, effectively exercising cost control (Santana, Silva & Gonçalves, 2017; Zart, Zart & Zanatta, 2018).

When identifying the activities involved in the production process of a product, knowledge of the costs is essential for constructing the price. In this sense, Rizzi and Zanin (2018) point out that, due to their practicality and simplicity, cost-based methods are the most widely used. Wang, Sun and Wang (2015) point out that managers feel more comfortable and prefer to use this method for pricing because all the costs incurred are built into the sales price, thus acting with financial prudence.

The most commonly used models for the cost-based pricing method are: full cost, marginal costs, rate of return, standard cost and *markup*. The latter, in free translation, markup rate, which is characterized as a percentage applied to the cost of a given product, this being the percentage margin. Garrison, Noreen and Brewer (2013) state that *markup* is a margin that differentiates the selling price from the cost price.

Wernke (2010) points out that in order to determine the percentage margin, or *markup*, in addition to knowing the product's costs, market conditions must be taken into account. In addition to costs, it is important to consider taxes and sales expenses, salesmen's commissions and the profit margin.

Rizzi and Zanin (2018) agree that the *markup is used to calculate how much you want to earn based on the cost of acquiring the products; the margin generated by the markup, for example, is intended to show the percentage of profit over the marginal cost in pricing. However, by not considering other relevant factors, such as customers and competitors, pricing exclusively using this method can lead to mistaken pricing decisions.*

Cost-based pricing aimed at forming the price of a liter of açaí is relevant in addressing the influence of the seasonality of the fruit. Accordingly, "agricultural production is intimately dependent on climatic and edaphic factors that limit or increase the cost of production of a large part of the products that are economically exploited" (Bento & Teles, 2013, p. 15), so seasonal periods generate significant changes in the assembly of costs and in the formulation of the *markup*.

2.2 Market-Based Pricing

The study of market-based pricing makes it appropriate not only to explore perceptions of supply and demand factors, but also of marketing, competition and customers. Dyson, Farr and Hollis (1996) point out that the brand and the marketing factor, as well as the competition and customers, exist in the minds of potential consumers, and what these consumers think about

the brand, in particular, is what determines its value and its associations, such as price, for example. For Bernardez (2005), creating an offer that is better than that of competitors and generating customer satisfaction are the main roles of marketing, since price is influenced by whether or not the customer increases their demand.

In addition to input quality, location and promotion, price is also seen as one of the key components in developing a marketing strategy for agricultural products. In this sense, "in the market, the price of a product can convey various messages to consumers, since it is seen by them as an indicator of quality, value/cost, scarcity or status symbol" (Elepu, 2018, p. 3).

Price setting becomes a critical decision in product formation, so pricing strategies can be studied from different perspectives. The dynamic strategy, or contingent pricing, means that the company tends to set prices for each period according to need, based on consumer demand and other market and product information. (Liu, Zhai & Chen, 2019)

The constant change in the market forces companies to adapt their prices accordingly (Johari, Hosseini-Motlagh & Rasti-Barzok, 2019). In competition, it is assumed that the market is segmented into four levels, which are: perfect competition, monopolistic competition, oligopolistic competition and monopolies, and within each type of competition, pricing will be treated differently, seeking to identify who its direct competitors are and their pricing practices and how they behave in the market (Pinto & Moura, 2011).

In a market of perfect competition, which is comparable to the açaí market, the product on offer is uniform among competitors, the buyer has an easy choice of seller and the market price is basically the same (Macedo & Rosadas, 2005; Pinto & Moura, 2011). In summary, market-based pricing aims to connect the organization to the customer through marketing, aligning quality indicators with the company's strategic objectives and creating an offer that can compete with the competition in a highly competitive market.

2.3 The Influence of Agricultural Seasonality on Pricing

The seasonality of agricultural production, due to climatic variations in the seasons, is directly linked to supply conditions and price formation, as Pino (2014) points out, altering the cost of acquiring raw materials. Gallo (2007) states that the prices of agricultural products are highly unstable compared to other products on the market.

Silva Neto, Pinheiro, Parre & Alves (2006) report that some externalities directly and indirectly affect seasonality: climatic factors and off-season issues, which is why most agricultural products are subject to price volatility associated with seasonal factors. Bento and Teles (2013) warn of the need to analyze and adopt models, techniques and strategies that will work as a tool to circumvent and minimize losses during this period. Among the techniques and strategies, Carvalho, Sáfiadi & Ferraz (2008) state that knowledge of seasonal changes in agricultural prices is essential.

In a regional analysis, Nogueira and Santana (2009) summarize that agricultural production shows fluctuations which are reflected in price instability, characterizing the harvest season, with below-average prices, and the off-season, with above-average prices. These authors explain that in the state of Pará, açaí is in excess supply on the market during the harvest season, i.e. there is more production, and during the off-season the price rises significantly due to the shortage of supply.

This phenomenon demonstrates the law of supply and demand which, according to Buechner (2018), is limited to agricultural markets and consists of many companies producing the same product. Alves and Caetano (2016) argue that supply and demand are two economic

variables that help define market costs and prices. They also add that observing costs and the market structured around the law of supply and demand provides an overview of how the price is formed.

Nogueira, Santana and Garcia (2013) explain that the demand for and supply of açai, like other fruits found in the state of Pará, are inelastic to price. As a result, the quantity demanded and supplied of the fruit is relatively more sensitive to changes in price. Based on income elasticity, açai is considered a normal good, since demand tends to increase almost proportionally to the growth in consumer income. However, unlike seasonality, the analysis of supply and demand is directed towards a market-based study, reflecting the aspects of a competitive market, since the açai sold by one producer is identical to the açai offered by other producers (Buechner, 2018).

3 Methodological procedures

This research is classified as exploratory, with a qualitative-quantitative approach to the problem. Semi-structured interview scripts were applied in person with açai scouts, who are the entrepreneurs responsible for the points of sale. The field research was carried out by 86 students from the Faculty of Accounting at the Federal University of Pará from February to June 2019 (Rangel, Rodrigues & Mocarzel, 2018).

The survey instrument also aimed to collect socio-demographic data on the interviewees and the establishments (açai pulp sales points), and open-ended questions aimed at capturing the empirical perceptions of the açai beaters interviewed, in order to obtain the determining factors for the formation of the price of a liter of açai. Initially, 258 instruments were collected, however, after analysis, 112 were withdrawn from the survey for presenting inaccurate and/or missing answers, thus 146 were considered qualified to make up the sample, those that presented objective and clear content to answer the research question.

The study of the data was based on the content analysis technique (Bardin, 1977), which followed the following routine: a) pre-analysis, in which the material was organized by preparing the collected data according to criteria of relevance and discarding content that was unnecessary to the research; b) exploration of the material, in which the *corpus of the* research was transformed into three categories of analysis, namely: 1st) Determining factors for pricing based on costs; 2nd) Determining factors for pricing based on the market; and, 3rd) Determining factors for pricing based on costs and the market; c) data processing was carried out by systematizing the information obtained, using electronic spreadsheets, gathering the data and designing tables for analysis, according to the definition of the categories of relevance.

All the information collected on the profile of the açai beaters and the characterization of the establishments in the neighborhoods surveyed was compiled. ATLAS.Ti 8 software was then used as a support tool for qualitative analysis. Finally, the information was interpreted, leading to the results presented in this research.

The statistical analysis included the characterization of the members who took part in the study using the simple frequency of the variables studied and an association test between the determining factors in the definition of the price charged by the açai beater, their profile and the characterization of the establishment. Finally, the information was interpreted, leading to the results presented in this study.

4 Results and Analysis

The data in Table 1 shows the results of the profile of the açai mixers.

Table 1
Profile of açai beaters in the Belém Metropolitan Region

Units/ Numerical frequency	Total number of scouts interviewed		Beaters that price with cost-based determinants		Beaters that price with market-based determinants		Beaters that price with cost and market-based determinants	
	Relative Frequency (%)	Absolute Frequency Unit	Relative Frequency (%)	Absolute Frequency Unit	Relative Frequency (%)	Absolute Frequency Unit	Relative Frequency (%)	Absolute Frequency Unit
Operating time								
0 to 10 years old	53	77	60	53	45	10	42	15
11 to 29 years old	36	53	31	27	50	11	32	11
30 years or more	11	16	9	8	5	1	26	9
Total	100%	146	100%	88	100%	22	100%	36
Handling course								
Yes	60	88	69	60	57	13	52	19
No	40	58	31	28	43	9	48	17
Total	100%	146	100%	88	100%	22	100%	36
Entrepreneur by								
Opportunity	61	89	68	60	56	13	58	21
Need	39	57	32	28	44	9	42	15
Total	100%	146	100%	88	100%	22	100%	36

Source: Research data (2020).

The results allow us to infer that most of the interviewees have experience in this segment, and most of them consider themselves entrepreneurs by opportunity, that is, they were entrepreneurs who, in theory, studied the market and prepared for the business and, because açai is an attractive product with intense commercialization, chose to invest in this market segment. Ribeiro (2019) corroborates this context when he points out that açai has come to occupy a prominent place among national and international fruit pulp consumers, and this is reinforced by Silva (2017) and other authors, when they point out that the main consumer market for açai is the Northern Region, especially the state of Pará.

Another reflection of this scenario can be seen in relation to handling courses, with most of the mixers reporting that they had taken part in açai pulp handling courses. This shows that they are concerned about quality production, which can be a determining factor in the price of a liter of açai.

Although selling açai in liters is a very old and popular practice in the state of Pará, it was observed that a small number of the churners interviewed had significant experience (over 30 years). This may be a reflection of the obstacles faced by açai churners, with the off-season being the main obstacle pointed out by the churners themselves, as during this period the

Anderson Roberto Pires e Silva, Jorge Lucas Castro Furtado, Elyany da Silva Amador and Márcia Athayde Moreira

product becomes scarce and the price tends to increase, and the quality of the açaí decreases during the off-season.

As a result, many wholesalers are unable to stay in the market, citing the difficulty of maintaining a product with a high price and low quality. In this context, Bento and Teles (2013) warn of the need to analyze and adopt models, techniques and strategies that will work as a tool to circumvent and minimize losses during the off-season.

The data in Table 2 shows the results of the profile of açaí churn establishments.

Table 2

Characterization of the establishments that prepare and sell liters of açaí

Units/ Numerical frequency	Total number of scouts interviewed		Beaters that price with cost-based determinants		Beaters that price with market-based determinants		Beaters that price with cost and market-based determinants	
	Relative Frequency (%)	Absolute Frequency Unit	Relative Frequency (%)	Absolute Frequency Unit	Relative Frequency (%)	Absolute Frequency Unit	Relative Frequency (%)	Absolute Frequency Unit
Formalization								
MEI	22	32	23	20	21	5	20	7
ME	11	16	12	11	5	1	12	4
Not formalized	67	98	65	57	74	16	68	25
Total	100%	146	100%	88	100%	22	100%	36
Quality seal								
Yes	32	47	33	29	45	10	22	8
No	68	99	67	59	55	12	78	28
Total	100%	146	100%	88	100%	22	100%	36
Importance of the activity								
Individual income generator	18	26	19	17	9	2	20	7
Generates family income	70	102	73	64	55	12	71	26
Not important	12	18	8	7	36	8	9	3
Total	100%	146	100%	88	100%	22	100%	36

Source: Research data (2020).

Although there is a significant number of açaí mixers who are considered entrepreneurs by opportunity and who have also taken handling courses, the majority have not managed to obtain the quality seal and have not formalized their businesses (either as MEI or ME). This can be seen as a negative factor from an economic and social point of view. This may have an impact on the sustainability and continuity of the ventures, since table 1 shows that a small percentage of the handlers have remained in the market for more than 30 years, even in a scenario where the majority of the handlers indicate that this activity is the main generator of family income.

It should be noted that formalized enterprises have greater possibilities of obtaining credit and/or financing in the market, as well as enjoying some tax (simplified taxation), social

security and labor benefits for their employees, which in theory contributes to the sustainability and continuity of the enterprises.

Based on the proposed content analysis, three categories of analysis were developed: I) determining factors for pricing based on costs; II) determining factors for pricing based on the market and, III) determining factors for pricing based on costs and the market, which will be discussed below.

4.1 Determining Factors for Cost-Based Pricing

After organizing the information, it was found that, out of a total of 146 participants, 88 açai mixers (61%) directed their answers towards determining factors related to costs. Tables 1 and 2 show that the highest percentage in this category were: Short to medium time in the market; Training course for handling the fruit; Entrepreneurial motivation due to opportunity; Not formalized; Lack of a quality seal and Production and sale of a liter of açai as the main activity for generating family income.

When analyzing the frequency of occurrence of certain terms, constructions and references that correspond to the determining factors based on Costs, it was noted that the beaters understand that the main factors are: Price of raw materials; harvest and off-season periods; electricity; packaging; freight; water and rent.

This scenario can be seen in the word cloud that expresses the frequency of occurrence of certain terms, constructions and references that correspond to the determining factors in cost-based pricing (Figure 1). Among the answers with the highest frequency of repetition are those that correlate with agricultural seasonality, as can be seen in the excerpt answered by scout number 133: "Price formation is influenced by the harvest and off-season periods, because the cost of açai is higher".



Figure 1 Cost pricing word cloud

Source: Research data (2020).

This result is in line with Pino's (2014) assertion that seasonality in agricultural production, due to climatic variations in the seasons, is directly linked to supply conditions and, consequently, to price formation. This is further reinforced by Bento and Teles (2013), who state that agricultural production is closely linked to climatic and soil factors that limit or increase the cost of production.

Some costs and expenses arising from production were also mentioned a lot, as in the following excerpt from Scout 31's response: "I consider the costs of renting the point, electricity, water, employees, packaging, middlemen and the company that collects the stones to be part of the price formation".

Scout, number 19, as well as indicating some of his production costs, complemented his answer by saying that he "uses a margin on the value of the raw material", which refers to the attempt to use the pricing method based on the *markup* model, which according to Garrison, Noreen and Brewer (2013) is practiced by means of a margin added to the cost of the product, or the difference between the selling price and the cost price. However, Martins (2010) warns that this margin must be sufficient both to cover costs and to generate a return on investment and profit.

It is therefore understood that the return margin calculated by the açai churners should not be based solely on the cost of the raw material or certain expenses, as the respondent had previously inferred, but in such a way as to cover the total costs of producing the product, so that the expected return can be achieved. Thus, when checking the cost factors involved in setting the sales price, it emerged that the mixers consider the off-season factors and the sum of some costs and expenses incurred during production, such as electricity, water, freight and packaging, to be determining factors.

However, Martins (2010) points out that for proper pricing, other factors need to be taken into account, not just costs. It was also found that the beaters don't calculate their total costs, because they don't allocate or control all their production costs, which can lead to probable pricing errors, elements also observed in the research by Dezordi, Vieira and Sausen (2022).

4.2 Determining Factors for Market-Based Pricing

In the analysis of the questionnaire, which asked about the factors that determine the price of a liter of açai according to the perception of the handlers, out of a total of 146 participants, 22 interviewees (15%) directed their answers to determining factors related to the market. Of these, tables 1 and 2 show that the following were the most frequent: Short to medium time in the market; Lack of participation in a training course to handle the fruit; Entrepreneurial motivation due to opportunity; Non-formalization; Lack of a quality seal; and Production and sale of a liter of açai as the main activity for generating family income.

Examining the frequency of occurrence of certain terms, constructs and references that correspond to the market-based determining factors, it was noted that the scouts believe that the main factors are: Competitors' prices; Competition; Quality of the açai; Market research and Location of the point of sale. This scenario can be seen in the word cloud, which expresses the frequency of occurrence of certain terms, constructs and references that correspond to the determining factors in market-based pricing.

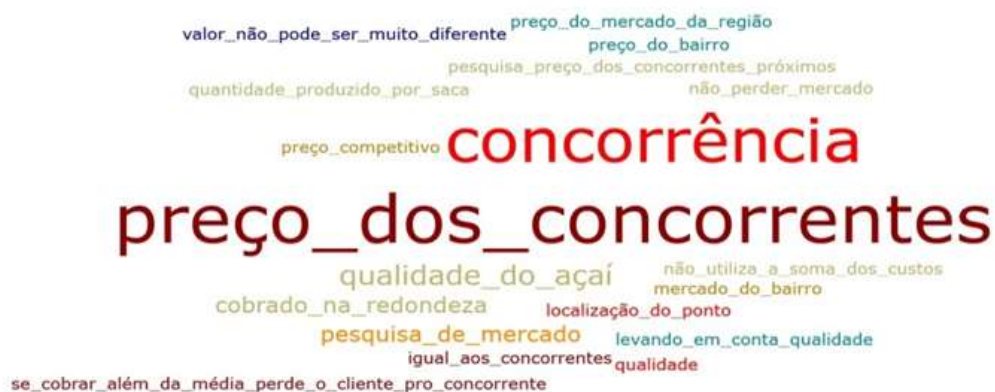


Figure 2 Market pricing word cloud

Source: Research data (2020).

During the interviews, there was a greater repetition of answers linked to the competition factor. Bernardez (2005) supports this result when he says that creating a better offer than competitors and generating customer satisfaction are key strategies in a market-based analysis.

It is noticeable that these scouts use the competition as a basis before even considering their costs and expenses and without having a concrete idea of their contribution margin or even their profit. This observation can be seen in some of the answers given: "If I charge a little more than the average, people will go and buy from the competition" (Mixer number 48); "The price I usually charge can't be too expensive or too cheap, it has to be the same as the others (competitors)" (Mixer number 49) and; "The location of the point and the competition are taken into account, so that the price isn't too different so as not to lose the market" (Mixer number 109).

Of the respondents who conditioned their price formation to market factors, a large proportion referred to the price practiced by the competition as the main aspect that influences their decisions. Morais, Jardim, Silva and Alves (2018) comment on the importance of this factor when they state that because the market environment is characterized by fierce competition, which leads to a reduction in profit margins, the strategies adopted in pricing can mean the survival of companies.

4.3 Determining Factors for Cost and Market-Based Pricing

Of the 146 samples in this survey, 36 açai churners, corresponding to 25% of the sample, directed their answers towards factors related to costs and the market. Tables 1 and 2 show that the highest percentage of açai churners who use determining factors based on costs and the market to price a liter of açai have: Medium to long time in the market; Participation in a training course to handle the fruit; Entrepreneurial motivation due to opportunity; Non-formalization; Absence of a quality seal and Production and marketing of a liter of açai as the main activity for generating family income.

When investigating the occurrence of terms, constructions and references that correspond to the determining factors based on costs and the market, it was found that the scouts understand that the main factors are: açai production costs and competition; açai quality; harvest and off-season periods, freight and competitors' prices; rent and competition; harvest and off-

season periods and competition; raw material prices and competitors' prices; and prices of middlemen, açaí production costs and competitors' prices.

This context can be seen in the word cloud, which expresses the frequency of occurrence of certain terms, constructions and references that correspond to the determining factors in cost- and market-based pricing.

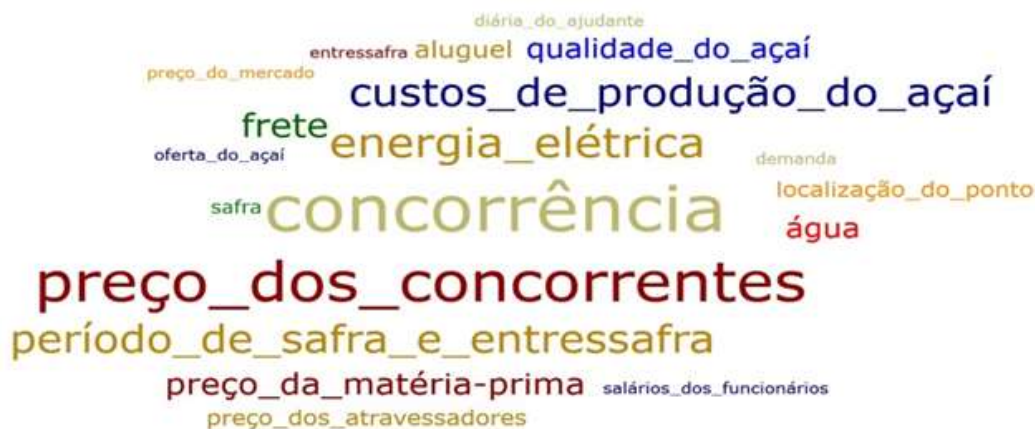


Figure 3 Cost and market pricing word cloud

Source: Research data (2020).

Among the scouts that make up this third category, there was a greater repetition of answers directed at the off-season, production costs and competition. This is evidenced in the quote from Scout number 104: "The quality of the açaí at harvest time is a determining factor, as are processing costs and competition."

The off-season is linked to the cost of acquiring the raw material and also tends to affect the quality of the liter of açaí. The concern about the off-season, as well as production costs and competition, is evidence of a greater understanding on the part of these producers of the need for a broad analysis of the determining factors for more appropriate pricing. Wernke (2011), in agreement, warns that when setting prices, in addition to knowing the product's costs, market conditions, taxes, sales expenses, salesmen's commissions and the desired profit margin must also be taken into account.

Those who showed the greatest control over decisions and strategies for setting the price of a liter of açaí were the beaters who conditioned their pricing to factors based on costs and the market, considering the off-season, product formation costs and competition to be essential. These results are in line with research by Rizzi and Zanin (2018) Dezordi, Vieira and Sausen (2020), who recognize that price formation goes beyond the limits of costs and expenses; the influence of the market, the level of activity and the expected return on invested capital must be considered together.

It should be noted that the analysis of the length of time açaí beaters have been operating in the market showed that beaters with a medium to long time in the business tend to price based on both cost factors and market factors, while respondents who direct their determinants to only one of the factors have a short to medium time in the business. This result shows the importance of the experiences acquired during the time they have been operating in the market for more appropriate pricing.

5 Final Considerations

The aim of this study was to identify the key factors in determining the price of a liter of açaí in the Belém Metropolitan Region (RMB), from the perspective of its producers. According to the results obtained, it can be summarized that açaí beaters in the metropolitan region of Belém (RMB) are concerned with setting their prices by prioritizing costs, without attributing the same level of importance to market analysis. However, their records and costing methods are still inadequate and based only on their experiences and perceived needs, and they need more training and formal education in the area under study (pricing).

This situation is all the more evident given the partial calculation of costs. Whereas, for more effective results and better decision-making, the mixers should control all the costs and expenses that influence the acquisition of raw materials, processing and marketing of the product.

It is understood that both options are equally important, and that scouts should always keep in mind that costs, as well as market research, are critical elements in price formation and the desired result. This implies proper knowledge of real costs and potential hidden costs, as well as analysis of the market, which has competition as its predominant factor.

This research contributes to the study of approaches to sales price formation, with an emphasis on the açaí fruit in establishments belonging to the metropolis of Pará, considering that açaí is a food product of cultural and economic significance to the RMB, as well as portraying the reality of the management of these businesses. It is recommended that associations of açaí churners, together with entities that promote entrepreneurship and public authorities, seek to reach out to these individuals through public policies that generate support and advisory projects, guiding them on better price management and business management.

It should be noted that the limitations encountered in carrying out the research consisted of the data collected. In addition to the detailing of the information that is consistent with the profile of the scouts and the characterization of the establishments.

It should be emphasized that this study was not intended to exhaust the discussion on the subject, but to highlight the importance of an ongoing debate about the process of setting the selling price of a liter of açaí. For future studies on this subject, we suggest investigating the pricing of other fruits considered to be highly commercialized, such as cupuaçu, bacuri and acerola, as well as the pricing of Amazonian oilseeds such as andiroba and copaiba, which stand out in the production of medicines and cosmetics, relevant products for the economy of the Amazon region.

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