Jurnal Teknologi Industri Pertanian 31 (3): 260-273, Des 2021
DOI: https://doi.org/10.24961/j.tek.ind.pert.2021.31.3.260
ISSN: 0216-3160 EISSN: 2252-3901

Terakreditasi Peringkat 2
SK Dirjen Pendidikan Tinggi, Riset, dan Teknologi No. 158/E/KPT/2021
Tersedia online http://journal.ipb.ac.id/index.php/jurnaltin

CONSUMER PREFERENCE ANALYSIS OF NEW COMPLEMENTARY ORGANIC FOOD PRODUCTS

ANALISIS PREFERENSI KONSUMEN UNTUK PRODUK MAKANAN PENDAMPING ORGANIK

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Makalah: Diterima 18 Agustus 2021; Diperbaiki 20 November 2021; Disetujui 02 Desember 2021

ABSTRAK

XYZ Puree Buah adalah salah satu produk Makanan Pendamping Air Susu Ibu (MP-ASI) yang dikembangkan oleh PT X. Rencana pemasaran untuk memperluas pasar produk dipertimbangkan dengan mengembangkan varian produk baru, yaitu XYZ Puree Buah Organik. Rencana tersebut dilakukan dengan memberikan penawaran harga baru untuk tiap varian produk dan mengubah target pasar dari Status Sosial Ekonomi (SES) atas menjadi menengah ke atas. Penelitian ini merupakan studi eksploratif yang bertujuan untuk mengevaluasi penerimaan konsumen, niat beli, dan preferensi terhadap konsep produk XYZ Puree Buah dan XYZ Puree Buah Organik. Tes non-parametrik berupa uji Wilcoxon signed-rank dan Mann-Whitney digunakan untuk menganalisis data dalam studi ini dengan membandingkan preferensi total sampel dan masing-masing kelompok sampel berdasarkan status sosial ekonomi dan kelompok pengguna dan bukan pengguna. Hasil penelitian menunjukkan bahwa konsep XYZ Puree Buah Organik lebih banyak dipilih daripada konsep XYZ Puree Buah dalam aspek kesukaan, keunikan, niat transaksional, dan niat preferensial oleh semua tipe pengguna. Namun demikian, jika harga dimasukkan sebagai bahan pertimbangan, maka niat transaksional konsep XYZ Puree Buah signifikan lebih besar daripada konsep XYZ Puree Buah Organik. Rekomendasi yang diberikan yaitu harga XYZ Puree Buah Organik dapat disesuaikan agar dapat lebih diterima oleh konsumen serta diperlukan peningkatan kepercayaan konsumen terhadap keamanan produk.

Kata kunci: preferensi konsumen, konsep produk baru, pengembangan produk baru, keinginan membeli

ABSTRACT

XYZ Fruit Puree is one of complementary food products developed by Company X. A marketing plan to expand the market of the product is considered by developing new product variants, namely XYZ Organic Fruit Puree. The plan is done by providing new price offers and changing the target market from upper Social Economic Status (SES) into middle to upper. This study aimed to evaluate consumer's acceptance, purchase intention, and preference toward XYZ Fruit Puree and XYZ Organic Fruit Puree product concepts. Non-parametric tests of Wilcoxon signed-rank test and Mann-Whitney test were used for data analysis in this study to compare the preference of total samples and each sample groups differentiated by its social economic status and usership. The result showed that XYZ Organic Fruit Puree concept was more preferred by all types of consumers in aspects of overall liking, uniqueness, intention to buy, and preferential intention. However, if price was taken into consideration, intention to buy for XYZ Fruit Puree concept was significantly greater than the XYZ Organic Fruit Puree concept. The recommendations given were the price of XYZ Organic Fruit Puree can be adjusted to be more acceptable to consumers as well as increasing consumer trust in product safety.

Keywords: consumer preferences, new product development, purchase

INTRODUCTION

Incorporating consumers' voice in early stages of New Product Development (NPD) process has been identified as one of the critical success factors in developing a new product (Cooper, 1999; Bhuiyan, 2011; Van Kleef *et al.*, 2005; Morgan *et al.*, 2018). Especially in the current environment that is characterized by rapid technological pace and rapid changing customer preferences (Wang *et al.*, 2015), failure to incorporate consumer's voice in the new product devel opment will reduce competitive differentiation that will impact firm performance (Sheng *et al.*, 2013). Competitive differentiation leads to improved customer satisfaction, new markets and maintained competitive position in current market (Prahalad and Ramaswamy, 2004; Sheng *et al.*, 2013). Involving customers early in the new product development process (Chang and Taylor, 2016) will help the company to understand customer's voice better and develop products that meet their needs/wants (Morgan *et al.*, 2018), thus, are critical to success of product development (Prahalad and Ramaswamy, 2004; Floren *et al.*, 2018).

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In order to maintain its competitive position, a company is challenged to meet the customer needs/wants and minimize time to market (Shilling and Hill, 1998). To maintain or create a successful product is a big challenge for companies, including Company X. Company X is a well-known national company that specialized in nutritious food and beverage products in all life cycle (infants to elders). They have produced a wide range of successful nutritious product, including formulated complementary food for older infants and young children. Complementary food is defined as foods that are suitable for use during the complementary feeding period, which means that it is intended for feeding older infants and young children in their transition from exclusive feeding of breastmilk and/or substitutes to eating the family diet (CODEX, 2013).

Fruit in a baby's life is considered as an important source of fibers that must be consumed at least once everyday to ensure a good digestion process. Therefore, providing fruit for baby to consume everyday has become a repertoire. However, research conducted by Company X in 2014 stated that most mothers choose to give fruits that are not a hassle to prepare and prefer to give fresh fruit. Another research conducted by Company X in 2018 stated that there is a tension in fruit preparation for baby, especially for baby under 9 months old. Preparing fruits for baby can create hassle of preparation when traveling, dealing with the mess the baby makes when eating, choosing which fruit to give and to deal with the leftovers or if baby happens to dislike it, and the hassle of fruit peeling, steaming, and mashing process. Even after 9 months old, the hassle still exists even without steaming and mashing so much. Mothers still need to deal with the challenge in choosing what fruits the baby likes and dealing with the mess. Many types of complementary foods are available for babies and young children providing additional energy and critical nutrients (Fewtrell *et al.,* 2017). The complementary foods are also offered in various forms (liquid, pureed) that packaged in jar or pouch with its own benefits (Koletzko *et al.*, 2018). Product in pouch provide additional practicality and time saving for mothers since the contents can be directly squeezed into the mouth of the babies. Nevertheless, there are growing concerns of using this food products in terms of the absence of reciprocal interaction between parents and babies and nutritional composition of the product (Koletzko *et al.,* 2018).

Responding to this, Company X develop XYZ Fruit Puree as a new complementary food product ever since its launching in 2017. It is also a breakthrough innovative a complementary food product as it is the only local branded baby fruit puree product in Indonesian market. XYZ Fruit Puree is made from 100% real fruit without any addition of sugar and preservatives with pasteurization that ensures the product safety for consumption. Each product is sold in an 80 g standing aluminum pouch with small neck that is designed to support baby's self-feeding skills with 3 variants: (1) carrot, apple, and pumpkin, (2) banana, strawberry, and apple, and (3) apple and peach. XYZ Fruit Puree is targeted at mothers with Social Economic Status (SES) who has baby aged 6-18 months old. The selling of XYZ Fruit Puree has been well received by the market as the selling out (in Tonnage) of XYZ Fruit Puree has been increasing. The growth of XYZ Fruit Puree selling out in 2018 was growing with a growth rate per semester was 69,3%. In response to that, Company X creates two product concepts of fruit puree products and plan for market expansion. They intended to expand the market by adding organic fruit puree variants that have a more premium fruit selections. The organic products appeal to the growing awareness of consumers in having healthier, safer and environmental-friendly products (Shaharudin *et al.,* 2010; Nocella and Kennedy 2012; Marian and Thøgersen, 2013). The product will be targeted for mothers with baby aged 6-8 months old of high SES, while the target consumer of existing baby fruit puree product is changed into mother with baby aged 6-18 months old of middle SES. The marketing plan is also followed with a new price offers according to the target consumers.

However, the development of new complementary food product in a form of fruit puree certainly has a lot of business considerations, some of them are it has a high risk and increase Stock Keeping Unit (SKU) that would require very high costs. Despite the increased awareness and movement related to organic products, research in customer intention to buy organic products is still limited, even more, in complementary food for infants. The main motives of consumer's food choice is related to the healthy aspects of a product (Grunert, 2013). The intention to develop new organic product needs to be considered in the product concepts which includes the nutritional content, sensory, and nutrition information on the packaging (Grunert, 2013). Therefore, product concept tests and preference analysis need to be done to gain insights on the product development of organic fruit puree of Company X which is the aim of this paper. The objective of this paper is to explore different aspects considered to be important to customer's purchase intention of organic fruit puree. The results of this paper will contribute to the Marketing and Product Development Department of Company X in evaluating new complementary food product concept for further development in NPD process. This paper aims to contribute in exploring consumers' acceptance, purchase intention, and preference toward the new weaning organic food product concepts during the early stage of new product development which is important for food research (van Kleef *et al*., 2005; Vidal *et al.,* 2013). In this way, this paper contributes to the literature of incorporating customer voice in the NPD processes (van Kleef *et al.*, 2005; Morgan *et al.*, 2018).

RESEARCH AND METHOD

Research Design

This paper was designed as a descriptive study that was conducted by conducting survey to obtain quantitative interpretation (Saunders *et al.,* 2021). This interpretation is used to evaluate consumers' acceptance, purchase intention, and preference toward the new weaning food product concepts. An online survey was conducted from 23 February to 4 April 2019 using Google Form. Further exploration through face-to-face interview was conducted in Cakung and Bekasi with the help of database from Posyandu. The face-to-face interview was carried out from 10 April to 6 May 2019.

Tested Product Concepts

There are two types of product concepts, referred to as Concept 1 and Concept 2 as shown in Table 1. Van Kleef *et al.* (2005) refers a new product concept as a description of new product that is clearly written that includes its primary features and consumer benefits, combined with a broad understanding of the technology needed. The new complementary food product concepts used in this research were made by Business Development Department of Company X.

Table 1. Two product concepts of fruit puree for infant

CONCEPT 1: XYS FRUIT PUREE	CONCEPT 2: XYZ ORGANIC FRUIT PUREE
Concept 1 is XYZ Fruit Puree concept. It is a new complementary food product of fruit puree product category which offers 100% real fruit content, no added sugar, no preservatives, no artificial sweetener and colorant, and no flavor enhancer. It is provided in three flavor variants of two to three mixed fruit selection. The product is a ready-to-eat food in a pouch with 80 g net weight. The packaging uses patented cap that is big enough so baby could not swallow it. The packaging also enables babies to eat by themselves.	Concept 2 is XYZ Organic Fruit Puree concept. It is a new complementary food product of fruit puree product category which offers 100% organic content, 100% real fruit content, no added sugar, no preservatives, no artificial sweetener and colorant, and no flavor enhancer. It is provided in three flavor variants of three to four mixed premium fruit selection (one of them has yoghurt). The product is a ready-to-eat food in a pouch with 80 g net weight. The packaging uses patented cap that is big enough so baby could not swallow it. The packaging also enables babies to eat by themselves. The XYZ Organic Fruit Puree concept is analyzed and discussed in this research as Concept 2. The big differences from both of the concept as mentioned before are XYZ Organic Fruit Puree offers more values, which are 100% organic content and more premium fruit selection.

Population and Sample Determination

The population of this research was mothers with 6 to 18 months old baby located in Jakarta, Bogor, Tangerang and Bekasi and differentiated based on their Social Economic Status (SES) that are used by Nielsen (2010). The age of the baby was determined based on baby eating milestones. Based on its research, Company X differentiated 3 phases in the baby's growth development: adapting (6-8 months old), progressing (10-12 months old) and transition period (older than 12 months old baby).

As the product concepts are targeted upper-middle income segment, SES A (consumer with monthly household expenditure more than 4 million rupiahs), SES B (consumer with monthly household expenditure more than 2.5 - 4 million rupiahs) and SES C (consumer with monthly household expenditure are in the range of 1.25 to 2 million rupiahs) were chosen. The respondents were chosen from the database of Company X's infant milk formula consumers as it has similar characteristics with the target of respondents.

The sample were retrieved from consumer database of Company X's infant milk formula as it has similar characteristics with the targeted consumers. All contacts were used and contacted through WhatsApp. Quota sampling was used to get inference of the population based on characteristics of SES and branded baby fruit puree usership. A total of 100 respondents were used as sample with focused characteristics of 50% SES AB-50% SES C out of 100 respondents, and 50% users-50% non-users out of 100 respondents. The 100 respondents are representative as the minimum sample size using Cochran Formula for an unknown population stated by Israel (1992) with desired confidence level of 95% and ± 10% precision.

Research Variable Identification

The consumers preference towards the two concepts were assessed in terms of acceptance, purchase intention, and preference using Social Economic Status (SES) (Kamakura and Mazzon, 2013) and usership (Wier *et al*,. 2005) of branded baby fruit puree as the variables for comparison. Overall liking (Moskowitz *et al.*, 2005), uniqueness (Goldsmith and Clark 2009; Dirisu *et al.*, 2013), intention to buy (Moskowitz *et al.*, 2005, Ferdinand 2002), preferential intention (Ferdinand, 2002; Bhuiyan, 2011), and intention to buy with price (Moskowitz *et al.*, 2005; Ferdinand, 2002) were used as variables with a measurement of four-point rating Likert scale (where 1 = really disagree, 4 = really agree) as shown in Table 2).

Data Collection Techniques

Literature study was done to acquire basis information related to Concept 1 and 2, consumers' perceived-value, and variables needed for the basis of consumers' preference analysis. The literatures consist of research being done by Company X, books, journals, theses, and articles.

Online survey method was prepared using structured questionnaire in the form of Google form. It is varied from categorical single answer, categorical multiple answer, and 4-scale Likert scale to measure the attitudes, opinions, and perceptions of a person or group of people (Sugiyono, 2011).

To meet the sample quote, face-to-face interviews were conducted through a process of purposeful discussion to gather valid and reliable data (Groves and Kahn, 1979). Gimmick in the form of baby food container was given as a token of appreciation for survey participation.

Table 2. Operational definition of new product concept test

Variables	**Operational Definition**	**Source**
Social Economic Status (SES)	A measure to determine and classify consumers into market segmentation	Kamakura and Mazzon (2013)
Usership	A measure to determine and classify consumers' product usage for a product category (baby fruit puree)	Wier *et al.* (2005
Overall Liking	A measure of how much a person likes the product, without any hint of purchase	Moskowitz *et al.* (2005)
Uniqueness	A measure of how much a person differentiate the product from other products	Goldsmith and Clark (2009); Dirisu *et al.* (2013)
Intention to buy	Intention of a person to purchase a product until the point of transaction	Moskowitz *et al.* (2005); Ferdinand (2002)
Preferential Intention	Intention of a person in willing to replace their usual product with the preferred product	Ferdinand (2002); Bhuiyan (2011)
Intention to buy with Price	Intention of a person to buy a product until transaction with price consideration	Moskowitz *et al.* (2005); Ferdinand (2002)

RESULTS AND DISCUSSION

A total of 3024 contacts were approached via WhatsApp and asked for their participation of the online survey. The link of online survey was sent by WhatsApp. The response rate of the online survey was 5.6% (170 total received responses), which is considered as low (Nulty, 2008). Data requirements and consistencies were checked by the researcher and the Consumer Insight Department of Company X) and concluded that the total valid responses of 110 responses. The total valid responses consist of 86 SES AB—24 SES C and 44 users—66 non-users. The sample quota conditions reached from the total valid responses were from 71 responses consist of 47 SES AB—24 SES C and 43 users—28 non-users, while the rest of the responses (39 responses) were not used. There is no reminder being sent. In order to fulfill the sample quota requirement that was needed for analysis, the rest of the data is obtained by using face-to-face interview. It resulted in 30 valid responses and 29 of them were used (consist of 3 SES AB—26 SES C and 7 users—22 non-users). The data collection ended with 200 total received responses and 140 total valid responses. The valid responses are sufficient to be used for the analysis with 100 sample responses and quota conditions of 50 SES AB—50 SES C and 50 users—50 non-users. The Respondent's profile describes the personnel characteristics including mother's age, baby's age, average monthly expenditure, location, and branded baby fruit puree usage and summarized in Table 3.

Concept Evaluation – Descriptive Statistics

Overall Liking

It can be noted from Figure 1 that more than 80% of all sample groups gave positive responses in overall liking towards both concepts. The positive responses give the information that the concept is accepted in the aspect of overall liking.

Table 3. Respondents' Profiles

Respondents Profile	Group	Frequency	Percentage (%)
Mother's Age	20 - 25 years old	16	16
	26 - 30 years old	37	37
	31 - 35 years old	34	34
	36 - 40 years old	11	11
	> 40 years old	2	2
Baby's Age	6 - 9 months old	41	41
	10 - 12 months old	22	22
	13 - 15 months old	23	23
	16 - 18 months old	14	14
Average Monthly Expenditure	IDR 1 250 001 – 1 750 000	17	17
	IDR 1 750 001 – 2 500 000	33	33
	IDR 2 500 001 – 4 000 000	20	20
	IDR > 4 000 000	30	30
	IDR 1 250 001 – 1 750 000	17	17
Location	Jakarta	47	47
	Bogor	5	5
	Depok	8	8
	Tangerang	18	18
	Bekasi	22	22

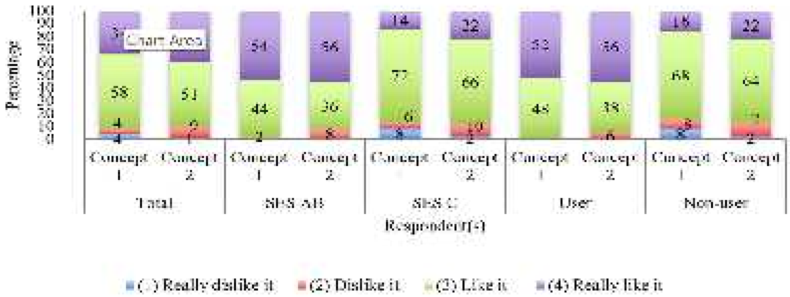

Figure 1. Overall liking evaluation

Table 4 showed top reasons for liking and disliking both concepts. Practicality and product contents are the attributes that made Concept 1 to be liked. Meanwhile, overall liking of Concept 2 was dominated by the attributes of product's contents, especially 100% organic. The organic content suits current consumers preferences of healthier, safer and environmental-friendly products (Marian and Thøgersen, 2013). The practicality value is the main reason for liking Concept 2, mainly by users and some of SES AB respondents. The changing lifestyle influences motivations related to food safety and consumption of processed food (Nocella and Kennedy, 2012). Changing women's lifestyle influences mothers' preferences to product that offers practicality in terms of fulfilling their baby's fruit intake and ready-to-use fruit puree. There were still cases of product concept's trustworthiness that made disliking of both concepts. Preservatives have always become a big concern for mothers in giving food to their baby and it emerged as reasons for disliking for both concepts due to improved awareness of product safety (Shaharudin *et al.*, 2010). The concern of preservatives exists among all sample groups in Concept 1 while in Concept 2 concerns exists among SES C and non-users. The issue may lie from the uncommon knowledge of respondents regarding food product technology which allows the absence of preservatives in foods. In Concept 2, the taste of the product still doubted to be liked by babies because the provided flavor variants were premium fruit choices which may not commonly found. Fear of leftover still becomes one of the concerns from SES AB respondents for both concepts. The knowledge of fruits that cannot be placed outside for a long period of time is commonly known so the right portion is desired by respondents.

Table 4. Top reasons for liking and disliking

Concept 1	Reasons for liking	By SES	SES AB	No preservatives, synthetic sweeteners and colorings, and flavorings (76%); Practical because ready-to-eat (66%); 100% real fruit (66%)
			SES C	Practical because ready-to-eat (48%); No preservatives, synthetic sweeteners and colorings, and flavorings (46%); 100% real fruit (42%)
		By Usership	Users	No preservatives, synthetic sweeteners and colorings, and flavorings (70%); 100% real fruit (68%); Practical because ready-to-eat (66%)
			Non-users	No preservatives, synthetic sweeteners and colorings, and flavorings (52%); Practical because ready-to-eat (48%); 100% real fruit and no added sugar (both 40%)
	Reasons for disliking	By SES	SES AB	Fear of sour taste (28%); Fear of leftover from one meal (26%); Fear of preservatives because ready-to-eat and fear of baby dislike the taste (both 24%)
			SES C	Fear of preservatives because ready-to-eat (40%); Fear of baby dislike the taste (26%); Fear of sour taste (14%)
		By Usership	Users	Fear of sour taste (24%); Fear of preservatives because ready-to-eat (18%); Fear of baby dislike the taste (18%); Fear of leftover from one meal (18%)
			Non-users	Fear of preservatives because ready-to-eat (46%); Fear of baby dislike the taste (32%); Fear of sour taste and fear of leftover from one meal (both 18%)
Concept 2	Reasons for liking	By SES	SES AB	100% organic (78%); No added sugar (68%); No preservatives, synthetic sweeteners and colorings, and flavorings (66%)
			SES C	100% organic (60%); 100% real fruit (42%); No preservatives, synthetic sweeteners and colorings, and flavorings (34%)
		By Usership	Users	100% organic (82%); 100% real fruit (68%); No added sugar and practical because ready-to-eat (both 64%)
			Non-users	100% organic (56%); 100% real fruit (38%); No preservatives, synthetic sweeteners and colorings, and flavorings (38%)
	Reasons for disliking	By SES	SES AB	Fear of baby dislike the taste (28%); Fear of sour taste (24%); Fear of leftover from one meal (22%)
			SES C	Fear of preservatives because ready-to-eat (28%); Fear of sour taste (22%); Fear of baby dislike the taste (20%)
		By Usership	Users	Fear of sour taste (26%); Fear of baby dislike the taste (18%); Fear of preservatives because ready-to-eat (10%)
			Non-users	Fear of preservatives because ready-to-eat (36%); Fear of baby dislike the taste (30%); Fear of sour taste (20%)

Uniqueness

It can be noted from Figure 2 that all sample groups perceived that both concepts are unique, seen from the positive responses that scored more than 80% for both concepts. Both concepts have a packaging in the form of pouch with a patented cap that is big enough so baby could not swallow it. The neck on top of the pouch also enables babies to eat by themselves by sucking the tip. The packaging itself eases mothers in giving food without the hassle or a mess. This kind of packaging is safe for baby and unique in Indonesian market. Table 5 showed top reasons for perceived uniqueness toward both concepts. Packaging makes as the most unique attribute from Concept 1. For Concept 2, product content was the most unique attribute perceived by the respondents. Concept 2 offers 100% organic content which was different from all the commercialized branded baby fruit puree in Indonesian market. The organic product is deemed to be healthier, nutritious, and safer compared to the conventional one (Hoppe *et al,*. 2013; Marian and Thøgersen, 2013). The uniqueness of packaging design and explicit representation of organic products that are healthier, safer, and nutritious in the packaging are important factor that influence mother’s perception (Lin *et al.*, 2015; Ekawati *et al.*, 2020).

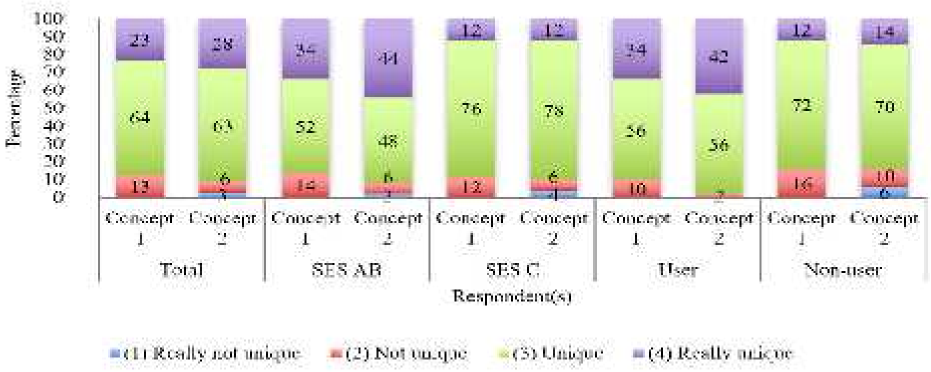

Figure 2. Uniqueness evaluation

Table 5. Top reasons for perceiving unique and not unique

Concept 1	Reasons for perceiving unique	By SES	SES AB	Packaging (56%); Product type (ready-to-eat fruit puree) (50%); Contents (44%)
			SES C	Packaging (50%); Product type (ready-to-eat fruit puree) (40%); Contents (36%)
		By Usership	Users	Packaging (64%); Product type (ready-to-eat fruit puree) (54%); Contents (42%)
			Non-users	Packaging (42%); Contents (38%); Product type (ready-to-eat fruit puree) (36%)
	Reasons for perceiving not unique	By SES	SES AB	Taste (16%); Packaging (14%)
			SES C	Packaging and product type (ready-to-eat fruit puree) (both 12%)
		By Usership	Users	Taste (16%); Packaging (12%)
			Non-users	Packaging and product type (ready-to-eat fruit puree) (both 14%)
Concept 2	Reasons for perceiving unique	By SES	SES AB	Contents (52%); Product type (ready-to-eat fruit puree) (50%); Packaging (42%)
			SES C	Contents (52%); Product type (ready-to-eat fruit puree) (40%); Packaging (40%)
		By Usership	Users	Packaging (56%); Contents (54%); Product type (ready-to-eat fruit puree) (54%)
			Non-users	Contents (50%); Product type (ready-to-eat fruit puree) (36%); Packaging (26%)
	Reasons for perceiving not unique	By SES	SES AB	Packaging (12%)
			SES C	Packaging (16%)
		By Usership	Users	Product type (ready-to-eat fruit puree) and taste (both 12%)
			Non-users	Packaging (20%)

Intention to Buy

It can be noted from Figure 3 that more than 60% of all sample groups wanted to buy the product. All sample groups were more willing to buy Concept 2 than Concept 1. SES AB (>80%) and Users (>85%) have higher intention to buy than SES C (>65%) and non-users (>60%) for both concepts, respectively.

Table 6 showed top reasons for willingness to buy both concepts. The practicality and product's contents were the main reasons for both concepts to be liked and create intention to buy. Practicality is offered by ease to eat or travel-friendly as the main reason of intention to buy. Practicality seems to have high importance to consumer's choice of processed food since practically packaged product make a consumer easy to use the products that leads to time saving and fulfillment of consumer needs and wants (Krytallis *et al.*, 2008).

Fruit as the main ingredient offers health and safety that encourages the intention to buy, moreover with no preservative. However, the beliefs that preservatives must exist in a ready-to-eat product cannot be easily put aside because it still emerged especially among non-users, as well as the belief that the packaged fruit is not as good as the real fruit. Mothers would want a guaranteed safety and quality to gain intention in buying the product. SES C and non-users were both had lower intention to buy for Concept 2 because the product was perceived as expensive. Previous study by Company X stated mothers has accepted the opinion that organic products were more expensive. Nevertheless, the right price range that can be accepted by consumers are needed for good marketing.

Preferential Intention

Preferential intention measures the willingness to replace the existing product with the offered concept. Respondents were willing to replace their existing product based on the positive responses (≥60%) from each group in Figure 4. Most of the responses lie on "willing to replace". Users have higher preferential intention than non-users for both concepts.

Table 6. Top reasons for willingness to buy

Concept 1	Reasons for willing to buy	By SES	SES AB	Travel-friendly (80%); Practical way to eat fruit (70%); Healthy snack for baby (52%)
			SES C	Practical way to eat fruit (54%); Travel-friendly (46%); Healthy snack for baby (30%)
		By Usership	Users	Travel-friendly (78%); Practical way to eat fruit (78%); Safe for baby (52%)
			Non-users	Travel-friendly (48%); Practical way to eat fruit (46%); Healthy snack for baby (32%)
	Reasons for not willing to buy	By SES	SES AB	Fear of preservatives because ready-to-eat (22%); Not as good as real fruit (20%); Expensive (20%)
			SES C	Not as good as real fruit (32%); Fear of preservatives because ready-to-eat (30%); Expensive (22%)
		By Usership	Users	Expensive (12%); Fear of leftover from one meal (12%); Not as good as real fruit (10%)
			Non-users	Fear of preservatives because ready-to-eat (44%); Not as good as real fruit (42%); Expensive (30%)
Concept 2	Reasons for willing to buy	By SES	SES AB	Practical way to eat fruit (76%); Travel-friendly (74%); Healthy snack for baby (56%)
			SES C	Practical way to eat fruit (62%); Travel-friendly (50%); Healthy snack for baby (26%)
		By Usership	Users	Practical way to eat fruit (84%); Travel-friendly (78%); Healthy snack for baby (56%)
			Non-users	Practical way to eat fruit (54%); Travel-friendly (46%); Healthy snack for baby (26%)
	Reasons for not willing to buy	By SES	SES AB	Expensive (26%); Fear of preservatives because ready-to-eat (22%); Fear of leftover from one meal (8%);
			SES C	Expensive (50%); Not as good as real fruit (20%); Fear of preservatives because ready-to-eat (18%)
		By Usership	Users	Expensive (26%); Fear of preservatives because ready-to-eat (12%)
			Non-users	Expensive (50%); Fear of preservatives because ready-to-eat (28%); Not as good as real fruit (26%)

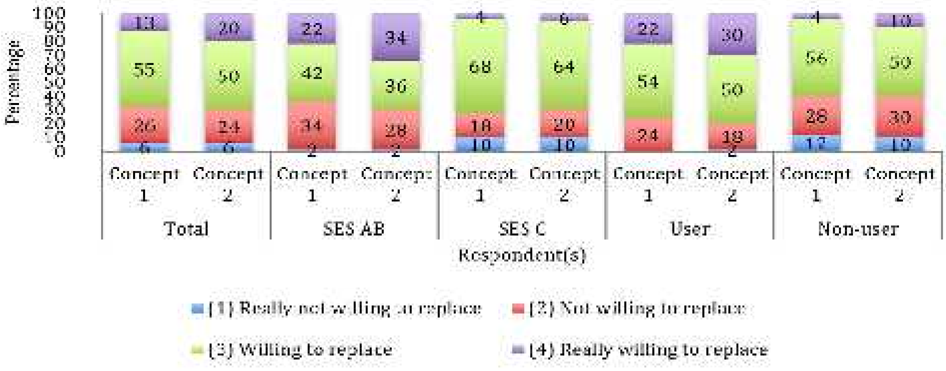

Figure 4. Preferential intention evaluation

Table 7. Top reasons for willing and not willing to replace

Concept 1	Reasons for willing to replace	By SES	SES AB	More practical packaging (58%); Fruit combination can make baby know a lot of taste (30%); Interesting fruit combinations and suitable size for one meal (both 28%)
			SES C	More practical packaging (42%); Fruit combination can make baby know a lot of taste (36%); Interesting fruit combinations (24%)
		By Usership	Users	More practical packaging (64%); Interesting fruit combinations (34%); Suitable size for one meal (32%)
			Non-users	More practical packaging (36%); Fruit combination can make baby know a lot of taste (36%); Interesting fruit combinations (18%)
	Reasons for not willing to replace	By SES	SES AB	Contents are not trusted (18%)
			SES C	Contents are not trusted (20%); Have not given more than one type of fruit per one meal (20%)
		By Usership	Users	Contents are not trusted (6%); Have not given more than one type of fruit per one meal (6%); Contents are the same (6%)
			Non-users	Contents are not trusted (32%); Have not given more than one type of fruit per one meal (20%)
Concept 2	Reasons for willing to replace	By SES	SES AB	More practical packaging (60%); Healthier contents (40%); Safer contents (34%)
			SES C	More practical packaging (44%); Fruit combination can make baby know a lot of taste (28%); Healthier contents and safer contents (both 18%)
		By Usership	Users	More practical packaging (70%); Healthier contents (40%); Safer contents (38%)
			Non-users	More practical packaging (34%); Fruit combination can make baby know a lot of taste (26%); Healthier contents (18%)
	Reasons for not willing to replace	By SES	SES AB	Contents are not trusted (18%); Non comparable price to offers (12%)
			SES C	Contents are not trusted (26%); Non comparable price to offers (18%); Have not given more than one type of fruit for one meal (14%)
		By Usership	Users	Contents are not trusted (14%); Non comparable price to offers (14%); Contents are the same (12%)
			Non-users	Contents are not trusted (30%); Non comparable price to offers (16%); Have not given more than one type of fruit for one meal (16%)

Table 7 showed top reasons for willingness to replace on both concepts due to practicality in terms of packaging. Fruit combinations create interests among mothers in preferential intention for both concepts because mothers do not want their babies to be picky. The organic content’s with no preservatives also one of the main reasons for preferential intention for Concept 2. The issue of trustworthiness has once again emerged for both concepts, especially among non-users and SES C respondents. This might be caused by the respondent profiles that are dominated by 6-9 months old baby that falls into food introduction phases. Mothers of this type of respondent are very cautious in giving one type of fruit per one meal to their baby.

Intention to Buy with Price

From Figure 5, the intention to buy with price of users for Concept 1 has the highest value of 80% positive responses, while other groups have a value of under 70%. Non-users give percentage of 50% for both positive and negative responses. Intention to buy with price of non-users for Concept 2 has really low positive responses. The highest positive values lie in the users with the score of 58%, followed by SES AB (52%), SES C (36%), and non-users (30%). Intention to buy for Concept 1 was higher than Concept 2. The intention to buy of all groups for both concepts decreased when the price of IDR 13 000 for Concept 1 and IDR 18 000 for Concept 2. The respondents gave IDR 10 000 as the most preferred price for Concept 1 (±49% of all sample groups). The most preferred price for XYZ Organic Fruit Puree based on SES were IDR 15 000 for SES AB (46%) and IDR 10 000 for SES C (28%).

Based on usership, users mostly preferred IDR 15 000 (42%), while non-users mostly preferred IDR 10 000 (34%). This is contradictory to the fact that high perceived value of the products in terms of their benefits usually will result in the willingness to pay a higher price (Shaharudin *et al*., 2010). This price is also lower than the price expectation of the company. A previous research of Focus Group Discussion (FGD) done by Company X in 2018 stated that price expectation of organic fruit puree would be IDR 20 000 – 25 000. This contradiction may occur because consumers could not see the perceived benefit of the products that leads to lower price expectation.

In conclusion, Concept 2 is better than Concept 1. It is showed by the greater value of positive responses in each variable of Concept 2. The greater value in all variables of both concepts given by SES AB compared to SES C and users compared to non-users gave the information that both concepts were more valued by SES AB and users.

Concept Evaluation – Inferential Statistics

Overall Liking

The overall liking scores between both concepts given by each sample units were not significantly different. Given by the %T2B scores (>80%), it can be inferred that respondents liked both concepts. SES AB has greater overall liking than SES C, as well as users has greater overall liking than non-users in both concepts. The differences between groups also showed significant difference, as shown in Table 8 and Table 9. SES AB showed significant difference of overall liking than SES C in both concepts, as well as users towards non-users in both concepts. This means that both product concepts were more valued towards SES AB and users rather than SES C and non-users in aspect of overall liking. However, even though the differences between groups were significant, their responses still give a high score of positive responses.

Uniqueness

The perceived uniqueness scores have similar median score. Even though the median scores were similar, the response distributions were all different. Given by the %T2B scores, Concept 2 was perceived more unique by SES AB and users. From Table 8 and Table 9, differences of perceived uniqueness between both concepts were not significant. In all groups perceived both concepts were unique as shown from the high median (3.00) and %T2B (>80%)

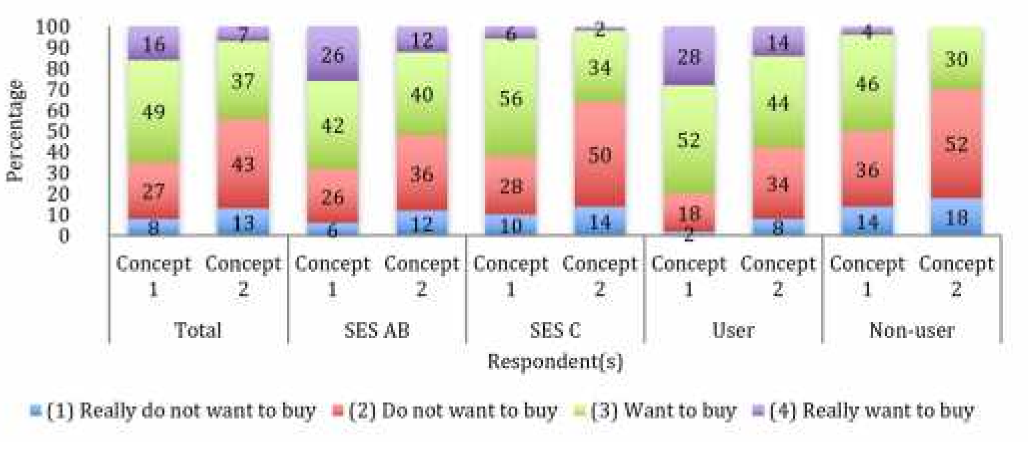

Figure 5. Intention to buy with price evaluation

Table 8. Inference analysis of Concept 1 by SES and Usership

Concept 1: XYZ Fruit Puree		**Total**	**By SES**		**By Usership**	
			SES AB	**SES C**	**Users**	Non-users
Base Respondents (n)		100	50	50	50	50
Overall Liking (1) Really dislike it – (4) Really like it	%T2B	92	98	86	100	84
	Median	3.00	4.00[b]	3.00	4.00[b]	3.00
Uniqueness (1) Really not unique – (4) Really unique	%T2B	87	86	88	90	84
	Median	3.00	3.00	3.00	3.00[b]	3.00
Intention to buy (1) Really do not want to buy – (4) Really want to buy	%T2B	75	82	68	86	64
	Median	3.00	3.00[b]	3.00	3.00[b]	3.00
Preferential Intention (1) Really not willing to replace – (4) Really willing to replace	%T2B	68	64	72	76	60
	Median	3.00	3.00	3.00	3.00[b]	3.00
Intention to buy with Price (1) Really do not want to buy – (4) Really want to buy	%T2B	65	68	62	80	50
	Median	3.00[a]	3.00[a]	3.00[a]	3.00[a,b]	2.50[a]

[a]significantly higher than Concept 2
[b]significantly higher than the paired group

Table 9. Inference analysis of Concept 2 by SES and Usership

Concept 2: XYZ Organic Fruit Puree		**Total**	**By SES**		**By Usership**	
			SES AB	**SES C**	**Users**	**Non-users**
Base Respondents (n)		100	50	50	50	50
Overall Liking (1) Really dislike it – (4) Really like it	%T2B	90	92	88	94	86
	Median	3.00	4.00[b]	3.00	4.00[b]	3.00
Uniqueness (1) Really not unique – (4) Really unique	%T2B	91	92	90	98	84
	Median	3.00	3.00[b]	3.00	3.00[b]	3.00
Intention to buy (1) Really do not want to buy – (4) Really want to buy	%T2B	78	86	70	90	66
	Median	3.00	3.00[a,b]	3.00	3.00[b]	3.00
Preferential Intention (1) Really not willing to replace – (4) Really willing to replace	%T2B	70	70	70	80	60
	Median	3.00	3.00[b]	3.00	3.00[b]	3.00
Intention to buy with Price (1) Really do not want to buy – (4) Really want to buy	%T2B	44	52	36	58	30
	Median	2.00	3.00	2.00	3.00[b]	2.00

[a]significantly higher than Concept 1
[b]significantly higher than the paired group

Seen by the group, SES C gave greater %T2B than SES AB for perceived uniqueness for Concept 1 although the difference was not significant. It can be inferred that both SES AB and SES C perceived Concept 1 as unique. By contrast, the perceived uniqueness for Concept 2 from SES group resulted in greater %T2B from SES AB than SES C and the difference was significant. Both SES AB and SES C perceived Concept 2 as unique, but the perceived uniqueness was more valued by SES AB. As for usership, the perceived uniqueness for Concept 1 of users was significantly greater than non-users. It can be inferred that although both users and non-users perceived Concept 1 as unique, users valued the uniqueness higher than non-users. Significant difference in perceived uniqueness between usership groups was also showed at Concept 2. Perceived uniqueness for Concept 2 was significantly greater on users than non-users. This uniqueness is found in terms of packaging design and nutritional contents compared to products in the same product category. From the result, it can be inferred that users and non-users perceived both concepts were unique compared to other products in the same product category in the market.

Intention to Buy

The intention to buy have similar median scores. According to the %T2B, respondents were more likely to buy Concept 2. Intention to buy was greater for Concept 2 than Concept 1. Table 8 and Table 9 showed that the intention to buy of SES C, users, and non-users did not differ significantly between Concept 1 and Concept 2. SES AB respondents have significantly greater intention to buy of Concept 2 than Concept 1. Concept 2 are more valued by SES AB. This result showed that SES AB would become a suitable target consumer for Concept 2.

Intention to buy for both Concepts of SES AB were significantly greater than SES C (Concept 1 and Concept 2). Intention to buy for both Concepts of users were also significantly greater than non-users (Concept 1 and Concept 2). It can be inferred that the offers from both concepts were more valued by SES AB and users. The upper level of SES and users are the most suitable target market for organic products or processed fruit (Ekawati *et al*., 2020).

Preferential Intention

Preferential intention gives information that SES AB, SES C and users were more willing to replace on Concept 2 than Concept 1. Table 8 and Table 9 showed no significant difference on the preferential intention. Given the %T2B scores (≥60%), it can be inferred that all groups were willing to replace in both concepts.

Seen by groups, preferential intention for Concept 1 of SES C was greater than SES AB although not significant. In contrast, preferential intention for Concept 2 of SES AB was significantly greater than SES C. It can be inferred that Concept 2 were more valued by SES AB in terms of preferential intention. Preferential intention for Concept 1 and 2 for users has significantly greater than non-users. The preferential intention is related to the willingness of to replace existing product with the product offered. It can be inferred that Concept 2 answered the needs and wants of SES AB better than SES C. Both concepts answered the needs and wants of users better than non-users.

Intention to buy with Price

The intention to buy at both concepts drops when price is given. The intention to buy with price was generally higher for Concept 1 than Concept 2. Respondents were more likely to buy Concept 1 with the price of IDR 13 000 than Concept 2 with the price of IDR 18 000. Significant difference also found at intention to buy with price between users and non-users. Users has significantly greater intention to buy of Concept 1 when price is given rather than non-users , the same thing applies in Concept 2.

Although SES AB considered as suitable target consumer for Concept 2 as SES AB intention to buy with price is significantly higher for Concept 1 rather than Concept 2. This means that the price of Concept 2 is not well accepted by SES AB. User have significantly greater intention to buy with price for Concept 1 than Concept 2, which mean Concept 1 is more accepted and considered as good enough.

CONCLUSIONS AND FURTHER RESEARCH

Conclusion

Concept 2 (XYZ Organic Fruit Puree) is valued better than Concept 1 (XYZ Fruit Puree) by each sample group and both concepts were more valued by SES AB and users in all variables. Respondents accepted Concept 2 better than Concept 1 in aspects of overall liking, uniqueness, intention to buy, and preferential intention. It is also tested from preferences between two concepts, in which the result is consistent. Offered contents, practicality, packaging, travel-friendly, and food combinations were the highlighted attributes that were commonly mentioned as reasons for acceptance of both concepts. If price is taken into consideration, the inference test showed that respondents significantly accepted Concept 1 better than Concept 2 in aspect of intention to buy with price.

Overall, it can be concluded that Concept 1 is good enough and well accepted by all consumer targets. Concept 2 needs to be developed further to be more acceptable for consumers of SES AB. More information on the pasteurization technology and the absence of preservatives uses in the products needs to be clearly declared in the packaging of the products. The increased perceived benefit of the products might increase the price expectation and their intention to buy.

For further research, the face-to-face interview is better to obtain more insights and details for the target consumer especially the SES C as they are more reluctant in accessing internet.

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