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Consumer demand analysis of Ytawes Districts dairy market: A review

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Abstract

A lookback on consumers' demand on milk products is vital for CSU-Piat's dairy center's business operation. The conduct of this research aimed to review the consumer demand in the Ytawes district's dairy market. This study utilized the descriptive research method using interview in collecting the required data and frequency count and percentages in analyzing the collected data. The respondents of the study were the household in the five municipalities of Ytawes District. From the findings of the study, the researchers conclude that Ytawes district has a high demand for dairy products. Consumers prefers to purchase and consume milk powders on a daily basis but also get the chance to buy and consume other dairy product lines which are locally-produced and normally sold at grocery/convenience stores. To mention, most of the milk consumers in every household are children. Moreover, consumers' purchasing behavior are generally affected by factors like price, taste, product safety and health benefits. While most of the consumers are not advised by health professionals to consume dairy products, their willingness to purchase and consume is evidenced by their average monthly purchases and current consumption patterns. Also, when compared to other advertisement media, the internet is the main source of dairy product awareness. Further, the researcher recommends that a consumer-demand analysis or review should be regularly conducted to keep track of the consumers' demand on dairy products and CSU-Piat's dairy center may opt to display its products in grocery/convenience stores to make it accessible to consumers and can make use of the internet for demand creation.

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Introduction

Dairy products are considered one of the most valued and patronized food products due to its undeniable benefits that it provides to consumers. There are set of dairy products which consumers can choose from and they vary from fresh milk, pasteurized, sterilized, flavoured, cheese, yoghurt and others.

On the other hand, the level and type of demand for a certain product should be carefully analyzed for the purpose of achieving the desired sales on the part of producers, as well as to ensure that the consumers' needs and wants are met. Moreover, there are factors that affects the level and frequency of milk purchases and it varies among market segments. Some of these are the source of milk (local or imported products), tastes, prices, packaging and others. However, the level of income, the availability of such products in a certain geographic location and the familiarity or awareness of product existence can also be a deciding factor. Cagayanos, particularly the Ytawes people, are said to be fond of consuming dairy products. However, it is necessary to know their specific needs, wants or preferences on dairy products in order to meet their demand. This study aims to review the milk consumption of Ytawes people to determine the level, frequency and factors that affects their milk purchases.

Materials and methods

Research Design

This study utilized the descriptive research design particularly interview method. Using the close-ended survey questionnaire through interview technique, the researchers collected the necessary data to review the consumer demand on milk.

Locale of the Study

This study was conducted in the five municipalities of the Ytawes district namely Tuao, Piat, Rizal, Solana and Enrile.

Respondents of the Study

The respondents of this study were the household consumers in the above-mentioned municipalities. There were 30 respondents for each municipality which were randomly selected.

Data Gathering Instrument

A close-ended survey questionnaire was developed and were personally administered to the respondents of the study. This survey questionnaire was subjected to validity and reliability test outside Cagayan to ensure its usefulness and relativeness to the study.

Data Gathering Procedure

Before the study proper, a permission was sought from the Local Government Units of the Ytawes District particularly in the Office of the Municipal Agriculturists who assisted the researchers in selecting the respondents. The crafted survey questionnaires were administered to the respondents by the researchers to ensure 100% retrieval.

Data Analysis

The collected data were tabulated and analyzed using frequency counts and percentages.

Results and discussion

Table 1 shows the frequency and percentage distribution of respondents according to age, sex, household size, highest educational attainment and average annual income. Data reveals that there is 27.33% of respondents whose age belongs to 29-38 years old, 22.67% belongs to 59 years old and above, 20.67% belongs to 18-28 years old, 18.67% belongs to 49-58 years old, and 10.67% belongs to 39-48 years old, respectively. However, 54.67% of the respondents are female and 45.33% are male. In terms of household size, 32.00% of the respondents has a household size of 1-3, 31.33% has a household size of 4-6, 25.33% has a 7-9 household size and 11.33% has a household size of 10 and above, respectively. Moreover, the highest educational attainment of the respondents is high school level/graduate which accounts for 47.33%, followed by 32.67% college level/graduate, 15.33% for elementary level/graduate and 4.67% for graduate studies, respectively. Lastly, the average annual income of the respondents is 101,000-200,000 pesos which accounts for 48.00%, followed by 36.00% for 0-100,000 pesos and 16.00% for 201,000 pesos and above, respectively. This data reveals that majority of the respondents are female, whose age is from 29-38 years old, with high school level/graduate as their highest educational attainment, a household size of 1-3 and an average annual income amounting to 101,000-200,000 pesos.

Table 1. Frequency and percentage distribution of respondents according to age, sex, household size, highest educational attainment and average annual income.

Age	Frequency (f)	Percentage %
59-above	34	22.67%
49-58	28	18.67%
39-48	16	10.67%
29-38	41	27.33%
18-28	31	20.67%
Total	150	100.00%
Sex		
Male	68	45.33%
Female	82	54.67%
Total	150	100.00%
Household Size		
10-above	17	11.33%
7-9	38	25.33%
4-6	47	31.33%
1-3	48	32.00%
Total	150	100.00%
Highest Educational Attainment		
Graduate Studies (MS and/or Ph.D.)	7	4.67%
College level/graduate	49	32.67%
High school level/graduate	71	47.33%
Elementary level/graduate	23	15.33%
Total	150	100.00%
Average Annual Income		
201,000 - above	24	16.00%
101,000 - 200,000	72	48.00%
0 - 100,000	54	36.00%
Total	150	100.00%

The frequency and percentage distribution of respondents according to their highest monthly purchases from a set of dairy products is presented in Table 2. As shown, 50.67% of the respondents frequently purchases milk powder, 22.00% purchases pasteurized milk, 10.67% buys yoghurt, 8.67% for flavoured milk and 8.00% for fresh milk, respectively. This data indicates that among these set of dairy products, consumers spends more in buying milk powder and spends less in flavoured and fresh milk.

Table 3 presents the frequency and percentage distribution of the respondents with regards to their current consumption pattern for a set of dairy products. Data shows that majority of the respondents prefers to consume fresh milk, yoghurt, and flavoured milk on annual basis, pasteurized milk is commonly consumed on a monthly basis, and milk powder is consumed daily.

Table 2. Frequency and percentage distribution of respondents according to highest monthly purchased from a set of dairy products.

Dairy Products	Frequency (f)	Percentage%
Fresh Milk	12	8.00%
Pasteurized Milk	33	22.00%
Milk Powder	76	50.67%
Yoghurt	16	10.67%
Flavoured Milk	13	8.67%
Total	150	100.00%

Table 3. Frequency and Percentage Distribution of Respondents According to their Current Consumption Pattern for a Set of Dairy Products.

	Frequency (f)					
Dairy Products	Daily	Every Other Day	Weekly	Monthly	Annual	Total
Fresh Milk	14	9	17	21	89	150
Pasteurized Milk	34	32	35	39	10	150
Milk Powder	75	38	26	8	3	150
Yoghurt	15	18	26	35	56	150
Flavoured Milk	13	16	23	36	62	150
	Percentage%					
Dairy Products	Daily	Every Other Day	Weekly	Monthly	Annual	Total
Fresh Milk	9.33%	6.00%	11.33%	14.00%	59.33%	100.00%
Pasteurized Milk	22.67%	21.33%	23.33%	26.00%	6.67%	100.00%
Milk Powder	50.00%	25.33%	17.33%	5.33%	2.00%	100.00%
Yoghurt	10.00%	12.00%	17.33%	23.33%	37.33%	100.00%
Flavoured Milk	8.67%	10.67%	15.33%	24.00%	41.33%	100.00%

The frequency and percentage distribution of respondents according to where they frequently purchase dairy products is presented in Table 4. As shown, 35.33% of the respondents purchases dairy products from grocery/convenience stores, 28.67% from city markets, 19.33% from online stores, 16.67% from schools or office canteens, and no one buys from milk outlets. This data indicates that majority of the consumers typically buys dairy products from grocery/convenience stores and never in milk outlets. This is supported by Upendram *et al.,* and Bytyqi *et al.* (2020) who stated that consumers prefers to buy milk and dairy products at grocery stores or supermarkets.

Table 4. Frequency and percentage distribution of respondents according to where they frequently purchase dairy products.

Type/Location of Stores	Frequency (f)	Percentage%
Online Stores	29	19.33%
City Markets	43	28.67%
Milk Outlets	0	0.00%
Grocery/Convenience Stores	53	35.33%
School or Office Canteens	25	16.67%
Total	150	100.00%

Table 5 shows the frequency and percentage distribution of respondents as to who among their household member has the highest consumption of dairy products. As presented in the table, 44.67% of the respondents declares that grandchild/ grandchildren consumes more dairy products, followed by grandparents which accounts for 25.33%, the son/s and/or daughter/s with 22.67% and the household head and/or spouse with 7.33%, respectively. This data reveals that grandchildren are the major consumers of dairy products while household head and/or spouse consumes least of the dairy products. This is in relation to the findings of Muunda *et al.* (2023) who confirmed that children are the major consumers of milk and milk products.

Table 5. Frequency and percentage distribution of respondents as to who among the household member has the highest consumption of dairy products.

Household Member	Frequency (f)	Percentage%
Household head and/or spouse	11	7.33%
Son/s and/or Daughter/s	34	22.67%
Grandchild or Grandchildren	67	44.67%
Grandfather and/or Grandmother	38	25.33%
Total	150	100.00%

The frequency and percentage distribution of respondents according to the importance of some factors that affects their decision to purchase dairy products is presented in Table 6. As shown in the table, whether dairy products are imported or not imported is important, majority of them declared that the products' brand are not important. However, the respondents claimed that the price, taste, product safety and health benefits are very important factor in their decision to purchase dairy products. This is supported by Bahety *et al.* (2022); Kaliji *et al.* (2019); Kurajdova *et al.* (2015) who stated that taste and price are influencing factors in consumers' milk purchases.

Table 6. Frequency and percentage distribution of respondents according to the importance of some factors that affects their decision to purchase dairy products.

Purchasing Decision Factors	Frequency (f)			
	Not Important	Important	Very Important	Total
Price	4	35	111	150
Taste	3	25	122	150
Product Safety	5	29	116	150
Health Benefits	9	44	97	150
Imported or Not Imported	25	123	2	150
Brand	98	36	16	150
Purchasing Decision Factors	**Percentage%**			
	Not Important	Important	Very Important	Total
Price	2.66%	23.33%	74.00%	100.00%
Taste	2.00%	16.67%	81.33%	100.00%
Product Safety	3.33%	19.33%	77.33%	100.00%
Health Benefits	6.00%	29.33%	64.67%	100.00%
Imported or Not Imported	16.67%	82.00%	1.33%	100.00%
Brand	65.33%	24.00%	10.67%	100.00%

Table 7 presents the frequency and percentage distribution of respondents according to their preference between imported and locally produced dairy products. The data reveals that 57.33% of the respondents prefers locally-produced dairy products while 42.67% prefers imported dairy products. This indicates that majority of the consumers prefers to buy locally-produced dairy products.

Table 7. Frequency and percentage distribution of respondents according to their preference between imported and locally produced dairy products.

Source of Dairy Product	Frequency (f)	Percentage%
Local	86	57.33%
Imported	64	42.67%
Total	150	100.00%

This is supported by Xu *et al.* (2019) who stated that there are consumers who pay little attention to milk attributes and they prefer dairy products which are manufactured from fresh milk over imported powdered milk (Boimah & Weible, 2021; Vroegindewey *et al.,* 2019; Hollinger and Staatz, 2015; Lèfevre, 2014).

The frequency and percentage distribution of respondents according to whether they are advised by a health professional to drink milk or not is presented in Table 8. As shown, 84.67% of the respondents are not advised to drink milk while 15.33% are advised to drink milk. Clark *et al.* (2022) mentioned that healthcare professionals directly advise consumers on dietary choices and it is necessary to have an improved nutrition education among health professionals. This data indicates that when relating this to their current milk consumption pattern, consumers prefers to drink milk even though they are not advised to do so, thus, indicating a demand for milk products.

Table 8. Frequency and percentage distribution of respondents being advised by a health care professional to consume milk products.

	Frequency (f)	Percentage%
Household or household members are advised to drink milk	23	15.33%
Household or household members are not advised to drink milk	127	84.67%
Total	150	100.00%

Table 9 presents the frequency and percentage distribution of respondents as to which advertisement media are they frequently informed about dairy products. Data reveals that 50.67% of the respondents declares that they are informed about dairy products through the internet, 24.67% from televisions, 10.67% from radios, 7.33% from billboards and 6.67% from flyers/leaflets which are provided by their community healthcare center. This data indicates that the internet is the major source of information or product awareness of the consumers. Further, internet is also reported to have the highest impact on brand or product awareness after the television Domazet (2017) and advertising through social media is proven to have a significant effect to product brand awareness (Abygail *et al.*, 2022).

Table 9. Frequency and percentage distribution of respondents as to which advertisement media are they frequently informed about dairy products.

Advertisement Media	Frequency (f)	Percentage%
Television	37	24.67%
Radio	16	10.67%
Billboards	11	7.33%
Flyers/Leaflets	10	6.67%
Internet	76	50.67%
Total	150	100.00%

Conclusions and recommendations

From the above findings, the researchers conclude that Ytawes district has a high demand for dairy products. Consumers prefers to purchase and consume milk powders on a daily basis but also get the chance to buy and consume other dairy product lines which are locally-produced and normally sold at grocery/convenience stores. To mention, most of the milk consumers in every household are children. Moreover, consumers' purchasing behavior are generally affected by factors like price, taste, product safety and health benefits. While most of the consumers are not advised by health professionals to consume dairy products, their willingness to purchase and consume is evidenced by their average monthly purchases and current consumption patterns. Lastly, when compared to other advertisement media, the internet is the main source of dairy product awareness. In relation to the abovementioned findings, the researchers recommends that a consumer-demand analysis or review should be regularly conducted to keep track of the consumers' demand on dairy products; CSU-Piat's dairy center may opt to display its products in grocery/convenience stores to make it accessible to consumers; and CSU-Piat's dairy center can make use of the internet for its products' demand creation.

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