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RESEARCH ARTICLE

DEMAND AND SUPPLY ANALYSIS OF CAKES MADE OF FRUIT IN THE EASTERN PART OF LAGUNA: A BENCHMARK STUDY FOR THE ESTABLISHMENT OF CAKE BUSINESS IN SINILOAN LAGUNA.

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Abstract

A study was conducted in the four municipality in the Eastern part of Laguna during summer of 2016. It aimed to seek an optimistic opportunity on creating a unique cake products that could meet interest of the people who are looking for a new variety of taste for cakes made of fruit.

Based on the survey there are a lot of bakeshop but there is none who produce cake products with cream filling. Utilization of raw materials such as fruits like ube, macapuno, langka and other fruit available during every season will be use as flavours for production of cake.

Results showed that population as one of the demand determinants increased by 13.79% from 2010-2015 in Siniloan Laguna. The demand for cakes is increasing as population grows every year. Changes in one's tastes and preferences was also the main concern of the study for the human satisfaction and consumption.

Results revealed that Supply for cakes are only limited in the eastern part of Laguna based on survey. There are four cake producers that has a maximum capacity production of 21, 796 cakes per year. It also shows that cake manufacturers only produces cake without cream filling.

Innovation of cake products is widespread and it is necessary to improved its taste for human consumption and satisfaction.

Hence the survey revealed that the Supply of cakes need to increase for production to serve and satisfy the gap of the Demand.

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Introduction:-

Decades ago, the usual merienda would be the regular Filipino fare, the kakanin," said Zinnia Rivera, general manager of Red Ribbon. "today cakes, pastries and breads have now become common food items in Filipino homes and enjoyed every day.[1]

Cake is considered as part of life because Filipinos are fond of eating cakes during celebrations. Sometimes, family celebrations won't be complete without cake to make it more extra special. [1] Cake products are developed and improved through innovations. As the demand for cakes continuously increase, its flavours and fillings also

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changed. The food preferences and taste of the people are also changing it is why it is timely to innovate the products for its human consumptions.

It is found out that consumers today are very particular in taste, health and also freshness. This is the reason why many producers and manufacturers improved and innovate its baked products.

Statement of the Problem

The study aims to gather evidence-based data in four municipality in the Eastern part of Laguna identifying the demand and supply analysis of cake products.

1. Specifically, it sought to answer the following questions:
2. What is the demographic profile of the respondents in terms of age, gender and address?
3. What is the total number of cake supplier/producer in the area?
4. What is the demand and supply of cakes in the eastern part of Laguna?
5. What are the economic impact and advantages of creating a new cake products in the area?

Research Methodology :-

The study used qualitative research design and the strategy adopted was exploratory. Qualitative research design is a form of investigation aiming on how people understand and make sense of their experiences and the world in which they live [9].

Broad exploration was conducted to generate valid and reliable information. A researcher-made survey questionnaire with open ended questions was used to allow the respondents to answer questions using their own words. After the survey questionnaire was answered, personal interview through an in-depth conversation between the researcher and the respondents was carried out to substantiate and explore further the respondents' answers. Through an in-depth conversation, the researchers were able to have reliable data and information which provided more significance to the study.

Review of Literature

In a survey released in 2013 by the Annual Survey of Philippine Business and Industry (ASPBI), the number of manufacturing establishments for 2010 reached more than 16,000. Interestingly enough, manufacturers of breads, pastries, cakes, pies and other similar perishable bakery products accounted for 20.3 percent or more than 3,000 of the total number of establishments. The demand for freshly baked products increased by 20% since 2011 according to research. [1]

According to Bayongan brought in more ideas and innovations "helping bakers achieve great taste and outstanding quality, while consumers get to enjoy the value for money they seek." She explained that the Taste Tomorrow event is about the new consumer rules, a result of a global research stating that "consumers nowadays have grown very demanding as they embrace the luxury of choice. They demand better value for money and would buy staple food at lower prices so they can buy higher quality and trendier baked goods. This paradoxical attitude gives the industry the opportunity to sell innovative products with higher quality and gross margin opportunities." [2]

As quality, freshness and nutrition have become increasingly important to customers, the mass-produced, often frozen products offered by the industry have lost appeal. The view that a sweet indulgence should be fresh and high quality has gained traction among consumers, who are increasingly turning to artisanal bakeries for fresh, innovative baked goods. [3]

The cake industry has grown to what is now a large scale concern also proved, not only the establishment of many branches by the key players, but also by the entry of foreign brands.

The growth of the industry has not only been a source of employment; it has been responsible for changing the way Filipinos eat and enjoy food that was, only a few decades ago, not the usual fare. [1]

"With the survey we were able to ask them what their preferences are and what they think the future of bakery, patisserie and chocolates will be in the next years. By knowing all these information we were able to share it to the bakers, food manufacturers which would actually help them in their business at least what we need to develop in terms of products development.[2]

It is found out that consumers today are very particular in taste, health, and also freshness. This is the reason why some of the producers and manufacturers hurried and even before products and ingredients which would help bring taste, health and freshness to the baked goods at the manufacturers,”

The combat for market share in the bread and cake production industry is fast growing. The rise of the cake and bakery has been a substantial challenge for bread and cake producers or manufacturers, survey showed for the past five years.

Findings

Demand

Sources of data on demand can be obtained either first hand or from existing documentation or both. Proper judgment must be exercised in deciding which methods to use. Interviews and special surveys are usually used to supplement the data collected from existing secondary sources. [5].

Siniloan as of 2015 December census is 40,243. The population increased by an average of 13.79% from 2010 to 2015. Barangay Information Management Systems (BIMS)

This survey represents the demand based on the products, population and changes in user's taste of the people living in town and its nearby areas. It was conducted to find out the necessary data for people and accurate analysis and presentation. The population of municipality of Pangil, Laguna has a total population of 27,711 in 2015.

In the 2015 census, the population of Mabitac was 20,530 people and Famy, Laguna has the total population of 16,587 people. [4]

Target markets also known as target consumers are certain clusters of consumers with similar or the same needs that most businesses target their marketing efforts in order to sell their products and services. Target markets can be separated into primary and secondary target markets. Primary target markets are those market segments to which marketing efforts are primarily directed and secondary markets are smaller or less important. [10]

For this proposed project, the primary target market will be middle aged group who wants to buy cake products for consumption that is composed of young professionals, and housewives. The secondary target market will be adults who want to buy gifts for some occasions and the teen group who always want to eat cake anytime. The adults are composed of people who are at the peak of their career, the retired and other working people who have interest of buying a cake for gift. By and large, it is the outmost desire of the proponent to serve the area and nearby towns. The survey sample consist of 200 respondents and is distributed to four municipality, Famy, Siniloan, Pangil and Mabitac.

Teen Age Group	Frequency		Total	Percentage
	Yes	No		
Siniloan	4	0	4	2%
Pangil	4	0	4	2%
Famy	2	0	2	1%
Mabitac	4	0	4	2%
Middle Age Group				
Siniloan	30	2	32	16%
Pangil	25	2	27	14%
Famy	32	1	33	17%
Mabitac	29	2	31	16%
Adult Group				
Siniloan	11	3	14	7%
Pangil	18	1	19	10%
Famy	14	1	15	8%
Mabitac	13	2	15	8%
TOTAL	186	14	200	100%

Table 1:-Demographic Profile of the Respondents by Age Group

Based on the survey conducted, there are one hundred eighty six (186) respondents who are interested to buy cake products. It is composed of Teen age group, Middle age group and Adult group. Based on the survey there are fourteen respondents who are not interested in buying cake products. The table shows that most of the respondents who are interested in buying cake products belong to the middle and adult age group

One more assumption, is that there is no change in the number of people or in simple words the population should remain the same because if population increases then demand for product is bound to increase as more people will mean more demand for products without any decrease in price. As one can see from the above statements that law of demand is based on many assumptions but still it is one of the basic and important concepts as far as economics is concerned.

One of the demand determinants is the population, it is used by the proponent when she conducted the survey for the demand. The demand assumption of cakes for Teen Age, Middle age group and Adults respectively is 96,725. It is based on the survey that there are 93% of the respondents who eats and consumed cakes. However, the remaining 7% of the respondents did not eat cakes. The proponent will used the 93% or 89,954 as total demand of cake products, the table below:

Table 2:-Total Population by Teen Age/Middle Age/Adult Group

Teen age Group	Total Population
Siniloan	8231
Pangil	6703
Mabitac	5551
Famy	4745
Total	25,230
Middle Age Group	
Siniloan	16238
Pangil	11985
Mabitac	9166
Famy	17931
Total	55,320
Adult Age Group	
Siniloan	5735
Pangil	4770
Mabitac	2994
Famy	2676
Total	16,175
GRAND TOTAL	96,725

The table shows the total population of the Teen age, Middle Age Group and Adult age group in the four respective are of the eastern part of Laguna.

Table 3:-Preferred Occasions in Buying Cake Products

Teen Age Group	BIRTH DAY	ANNIVERSARY	SPECIAL OCCASION	OTHER OCCASSION
Siniloan	4	0	2	0
Pangil	4	0	1	0
Famy	2	0	1	0
Mabitac	4	0	2	0
Middle Age Group				
SINILOAN	30	8	12	4
PANGIL	25	4	9	8
FAMY	32	4	9	5
MABITAC	29	7	10	7
Adult Age Group				
SINILOAN	11	3	4	3

PANGIL	18	2	3	2
FAMY	14	2	3	3
MABITAC	13	2	3	2
TOTAL	186	30	59	34

Based on the survey conducted by the proponent, out of one hundred eighty six (186) total respondents, for the Teen age group fourteen (14) responded for occasions like birthday and six (6) special occasions, for Middle age group for birthday (116), for anniversary (23), for special occasions (40) and twenty four (24) for other occasion. Adult group responded that they preferred buying cakes in occasions like birthdays (56), anniversary (9) and other occasion (13) and for other occasions responded (10).

Teen Age Group		Chocolate/ Peanut	Pineapple Cream	Macapuno/ Ube	Ube- /Langka	Ube/ Keso
SINILOAN	4	2	2	2	1	1
PANGIL	4	1	2	2	1	1
FAMY	2	1	1	2	1	2
MABITAC	4	2	2	3	1	4
Total		6	7	9	4	8
Middle Age Group						
SINILOAN	30	10	4	14	2	4
PANGIL	25	7	5	7	2	4
FAMY	32	10	4	11	3	4
MABITAC	29	9	5	8	3	4
Total		36	18	40	10	16
Adult Age Group						
SINILOAN	11	3	3	3	1	1
PANGIL	18	5	5	4	1	3
FAMY	14	3	3	5	3	3
MABITAC	13	3	4	4	2	1
Total	186	14	15	16	7	8
COMBINED TOTAL		56	40	65	21	32

Table 4:-Cake Flavors Preferred by the Respondents

Based on the survey conducted by the proponent for cake flavors, the preferred flavors by the respondents are Macapuno/Ube with the highest score of sixty five (65), next is Chocolate peanut with fifty six (56), for pineapple cream forty (40), Ube-Keso thirty two (32), and for Ube-Langka twenty one (21) cake flavors.

The survey results are gathered through food sampling and food tasting. Cake flavors preferred by the respondents on table 8 gathered more choices because they have five flavors to choose from

Supply

Supply is a fundamental economic concept that describes the total amount of a specific good or service that is available to consumers. Supply can relate to the amount available at a specific price or the amount available across a range of prices if displayed on a graph.

1. Based on survey is there is no cake with cream fillings in the area made of fruit.
2. This study shows that there is an opportunity for cakes in the target market. However, the proponent surveyed some existing cake house that might be offering cake products and could possibly be competitors.
3. For the result and record, there are four (4) registered cake house in town, namely: A Cake shop, B Cake shop, C Cake house, and D Cake shop for Siniloan.

At present time, based on survey, there is no cake with cream fillings in the area made of fruit. The total capacity produced was 21,796 cakes in a year by four cake producers in the market.

Table 5:-Total Number of Cake sold per Producer (Siniloan, Laguna, 2016)

Cake Producer	Total Number of cakes Sold /Producer (Jan- Dec.)
A	9200
B	7350
C	2975
D	2264
Total	21796

Based on the survey and interview, the first producer, named A, has the highest sales of cake products because they have the variety of cake products. A is a franchise and can supply cake products fifteen (15) to twenty five (20) cakes per day in different sizes. With the maximum of twenty five (25) cake products per day, A, can sell supply seven hundred fifty (750) per week and nine thousand (9000) cakes a year. The second producer, named B has the second highest sales of cake products because they are operating and existing for twenty years. It is well known in the area that offers made to order cakes. They can supply ten (10) to twenty (20) cakes a day in different sizes. With a maximum of twenty (20) cakes per day, named B, Cake house can sell six hundred (600) a week and five thousand four hundred cakes (7,200) a year.

The third producer, named C, has the third highest sales of cake products. It is also a franchise and it offers a variety of bread and pastries. The cake shop can supply five (5) to eight (8) cakes per day in different sizes.

With the maximum capacity level of eight (8) cakes per day, they can sell two hundred forty (240) a week and two thousand eight hundred eighty (2880) cake products a year.

The fourth producer, named D has the least sales of cakes because it offers a variety of bread products and at least 3 to 5 round cakes like chiffon and custard cake. The Law of Supply assumption the term "other things remaining the same" refers to No change in the price of factors of production and no change in the number of firms in the market.

The total number of cakes sold per cake producer is shown above, based on the survey conducted, the total cake sold per year is 21,796. The table shows that there are lean and peak season in selling cake products. The peak season are months of December and January. The rest of the months are considered the regular selling of cake products. Month of December is the season of Christmas and New year, and are considered the peak season for cake products. However, according to cake producers, lean months are February June, and August. The months of January, March, April, May, September and October are considered as a regular selling for cake products.

Demand and Supply Analysis

Demand and Supply Analysis involves the estimation of market demand and the supply for the output of the proposed project. It also involves identification and analysis of demand and supply determinants. [8]

Every year the population grows and increases based on the survey. It is understood that the population is growing and will continue to grow. Thus, there will always have a demand for any kind of products. One of which is the creation of new cakes with cream filling. The author is very positive that establishing this kind of business is very helpful for the community and people, and profitable for the owner.

Table 6 :-Demand and Supply Analysis

Total Demand	Supply	Demand –Supply Gap	%of Unsatisfied
71,495	21,796	49,669	70%

The table shows that there are total Demand-Supply Gap of 49,669 for the year. This shows that there are 70% of unsatisfied market which the proponent would like to get a certain market share.

Conclusion:-

A benchmark study for the establishment and production of Specialty Cake in the Province of Laguna shows that it is essentially doable. It is evident based on the survey conducted by the proponent that there is no specialty cake registered like one of the proponents project known and listed in the Department of Trade and Industry (DTI),

Victoria, Laguna. It is believed that there is a need for a specialty cake because it shows that the taste and preferences of the people are changed and continued to improve for its human satisfaction and consumption. It is also proven that one of the demand determinants like population is increasing.

One of the significant impact and consideration in doing this project is that, it create jobs for people in the community. It helps increase the welfare of the people through utilizing the locally produce fruits as the main flavour for the cake products. It helps people realized the value of being an entrepreneur to help increase skills and knowledge in developing a new business.

Utilization of locally produced fruits as the main flavour for the cake products which is abundant in the eastern part of the area.

Hence, the Supply of cakes should increase in production to satisfy the gap for the increasing demand of cakes.

The proponent is confident in her vision that this project will be socially acceptable and valuable to the people concerned especially in the eastern part of Laguna.

Recommendation

Further recommendation for this study, increase utilization of raw materials such as locally produce fruit products abundant in the area of the eastern part of Laguna.

The Local government Unit interpolations on promoting local fruit products should be implemented. Training skills and programs should be provided to create more entrepreneurs.

Creating and innovation of new variety of cakes should be appreciated to create more jobs and labor.

Furthermore, it starts as a business opportunity in creating a specialty cake shop where it will be the only specialty cake with fruit cream filling located in Laguna. It is beneficial to the municipality of Siniloan and Famy, and its nearby areas for it makes stronger retail sales, and it pays taxes and permits as a mandate by the government. The establishment of cake helps increase productivity and innovation and it can also improve ability to compete for labor.

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