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BAKERIES ENTERPRISE IN SRI LANKA

A Preliminary Investigation

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1. A General Introduction

In Sri Lanka, the development of bakeries as an enterprise was started since the beginning of this century especially, with the import of wheat flour in large scale to meet the food requirements of the country. Since then the traditional food habits of the people began to change and on a limited scale bakery products replaced some of the traditional meals. This process was augmented by the population increase, expansion of the plantation agriculture, and the rapid urbanization.

The market for bakery products was very limited at the beginning but gradually a favourable market was developed in the estate sector and in urban areas. However, it took a fairly long period to establish a market in rural areas. As a result of the slow growth of this enterprise the number of bakeries that were operating in the country until 1960 were about 1000. However, a rapid growth of bakeries can be seen after the period of 1960 when some restrictions were imposed upon the import of rice. By the period of 1975 this growth of bakeries came to a peak as a result of the direct and indirect encouragement given by the Government to establish processing enterprises. In this period a large number of small and medium size bakeries were started by both public sector organizations and private sector people to provide bread especially for those who lost the rice ration cards. The demand for bread was very high in this period and, therefore, every bakery was able to run with a satisfactory profit margin. The number of bakeries that operated during this period were about 6000.

This expansion of bakery enterprise made a considerable impact on the food consumption pattern of the people in the country. In short, it was twofold. -

- one, the notion of imperiality of bread as a major food became less important and similar importance was given to bread as in the case of rice. This happened in a massive scale irrespective of urban and rural differences.
- two, people became aware of the convenience of bakery products and hence in a very short time the traditional foods were replaced by bakery products. For example, in peak agricultural seasons the workers are served tea with some food before lunch. Prior to bakery products being popularized, these workers were served traditional foods like, milk rice, food prepared from local grains or root crops. But since the people became aware of the convenience of bakery products, all those traditional foods were replaced with bakery products.

imperiality (?)

Further changes of this process could be seen after 1978 when a remarkable migration took place from rural areas to urban areas in order to find employment in the rapidly developed services sector. As a result of this a favourable market for food items was developed in cities and bakeries performed a major role in this.

Several kinds of pastry items influxed to the food market in the city to satisfy the demand created by those who migrated and or travelled daily from rural areas to the cities for employment and other businesses. While the urban bakeries were flourishing in this way, the bakeries in the rural sector were lagging behind as there was no new incentive to its development. Together with this, four other factors were responsible for this situation of rural bakeries. They were -

- a. increase in the prices of raw material
- b. high competition
- c. bad quality products, and
- d. shortage of skilled labour.

Under these circumstances some the bakeries in the rural areas (and also in semi-urban areas) closed down and in some bakeries the volume of production was curtailed.

This situation is clearly shown by the following figures:

Per capita consumption of wheat flour and bread:

Kg per month		Urban	Rural
1978/79 -	Wheat flour	0.68	8.36
	Bread	3.07	2.57
1985/86	Wheat flour	0.51	4.63
	Bread	3.00	2.02

The distribution pattern of bakeries in urban and rural areas is very uneven. As it is estimated the total number of bakeries in the country at present is about 5000 and out of which nearly 1000 bakeries are not operating. The majority of the latter category are situated in rural areas. Out of the bakeries that are operating, nearly 1500 are situated in urban areas and 2500 are in the rural areas. This number of rural bakeries are very few when taking into account the size of the population in the rural sector. According to the 1981 census 78% of the total population is living in rural areas spreading out into 25000 villages.

The bakeries enterprise in Sri Lanka therefore has to be understood within this background and as it has happened in the past, the success or failure of this enterprise always rests upon the economic policy which the government introduces.

2. Types of Bakeries

The types of bakeries in Sri Lanka can be classified broadly into three categories on the basis of size -

- a. large bakeries
- b. medium bakeries
- c. small bakeries

The size of a bakery always means the capacity of the oven and it is defined according to the number of trays that can be put into the oven in ^{one} round of operation. This classification is, however, very crude because each type of bakery has ovens with different capacities. To make this further clear, the different capacities of ovens of the three types of bakeries are given below:

Type of Bakery	Capacity of oven
a. large bakeries	30,32,34,36 trays
b. medium bakeries	20,22,24,28 trays
c. small bakeries	12,14,16,18 trays

According to this, in one type of bakery there can be different capacities of ovens. The standard size of a tray is 18"x30" and this capacity is sufficient to hold either 12-14 mould breads or 24 flat breads. // The majority of large and medium bakeries are concentrated in urban and semi-urban areas while nearly 70% of bakeries in rural areas are small ones. In many cases bakeries are run by the owners of hotels and restaurants but in rural areas, in particular, they are ordinary people who run bakeries. However, in general, the owners of bakeries do not belong to the poorer class of people, although in some instances poor people also run bakeries. In many of these instances, the people who run the bakeries are not necessarily owners of the bakeries, they have taken on the bakery on an agreed rental from the owner.

3. Construction of Bakeries

In constructing a bakery a particular type of masonry skill is required. Until very recently a small group of people controlled this skill and it was passed from generation to generation. This monopoly has now broken down, and anybody can learn it if he/she wishes. The construction materials used for an oven are, clay, stones, quartz, broken glass, salt, bricks and fire bricks. These materials are used in the following manner:

a.	the bottom layer	stones	thickness 12 inch.
b.	the 2nd layer	quartz	thickness 12 inch.
c.	the 3rd layer	broken glass	thickness 12 inch.
d.	the 4th layer	salt	thickness 06 inch.
e.	the surface layer	brick/stone	thickness 06 inch.
f.	20-30 fire bricks		

In some bakeries the surface layer has been built with bricks while in others it has been built with stones. The advantages of these two are different. The advantage of a stone layer is that it gives heat for a longer time when once heated. But it consumes more fuel wood to heat at the commencement. The advantage of the brick layer is that it heats quickly and, therefore, the cost of fuel is comparatively less, but the disadvantage is that the heat does not last a long time.

The construction materials mentioned above are available locally and the prices may vary from area to area. Therefore, the initial capital cost in constructing a bakery have to be calculated on this basis. However, for a large bakery (including the oven, kneading room, store room and a space to keep final products) with a capacity of 34 trays (12'x12') would cost about Rs.65,000/- as initial capital. Whereas for a small bakery (12-18 trays) the initial capital cost would be around Rs.35,000/-.

4. Production and Distribution

A range of bakery products are available in Sri Lanka and these products can be categorised into three-

- a. bread and sweet products
- b. pastry
- c. cakes

Bread and sweet dough products are available all over the country but pastry and cakes are produced and distribute in cities and suburbs. There is no demand for these products in rural areas the prices of them are very high when compared with the prices of bread and sweet dough products. However, the range of sweet dough products available in rural areas is significantly large.

Raw materials used:

a. Urban bakeries -

bread: flour, sugar, bread compound, salt, yeast, water

sweet dough products: flour, sugar, margarine, yeast, eggs,
salt and water

pastry: flour, sugar, pastry, margarine, salt and water

Cakes: flour, sugar, margarine, eggs, baking powder,
essences, chocolate powder, fruits, colouring,
salt, water.

b. Rural Bakeries -

bread: flour, sugar, salt, yeast, coconut oil, water.

sweet dough products: flour, sugar, Hyco, yeast, salt,
baking-powder, water.

The above list shows that the raw materials used for bakery products in the urban and rural bakeries are different. For example, in making bread, bread compound is not used in rural bakeries. Similarly, margarine is not used by rural bakeries in producing sweet dough products. Instead, they use Hyco as a substitute. More often the quality of the raw materials used in the urban areas are different to those used in the rural bakeries. The reason for this is simply the low profit margin of the rural producers.

The following list gives the prices of raw materials and the gross profit margin of each group of products to the producers:

a. Prices of raw materials:

Unit: 1 kg	Prices: August 1989
<u>Raw material</u>	<u>wholesale price (Rs.)</u>
Flour	8.05
Sugar	24.50
Pastry margarine	41.78
Cake margarine	42.55
Yeast - grade I	74.50
grade II	62.00
Baking powder	42.00
Bread Compound	29.72
Hyco	32.00
coconut oil	19.00
salt	2.75
eggs (each)	2.10

b. Gross profit margin

<u>Product</u>	<u>cost of prod. (Rs.)</u>	<u>Profit margin</u>
Bread	3.01	5%
sweet dough products: (range from)	1.50-2.50	20%
Pastry (range from)	2.50-3.50	35%
Cakes (range from)	25.00-125.00	50%

According to these statistics it shows that the producer gets a highest profit margin from sweets and other products rather than from bread. Therefore, to run a bakery profitably every producer produces a volume of other products in addition to bread and sometimes produce a similar volume of bread and sweet dough products.

In some urban bakeries the profit margin of bread is sometimes less than 5% but their sales are very high. Quality of the bread of those bakeries is comparatively higher than other bakeries.

Raw materials are available for all producers. But the prices of these raw materials fluctuate very often by large amounts. For example, the price of flour, until July 1989 was Rs.7.20 per Kg but this was increased in August by .85 cts and again in September by .20cts. Similarly, the price of sugar also increased in February 1989 by Rs.1.00 and in June by Rs.4.00. Recently the price has gone up by another Rs.4.00. As a result of this the producers face greater problems in maintaining their volume of production and sales, as it directly affects the cost of production and thereby the wholesale and retail prices. When the retail prices increase the demand for bakery products naturally go down. On the other hand, when the wholesale prices increase as a result of an increase in the raw material prices, the retailer then tries to get a high profit margin. For example, in August, the price of 1 Kg of flour increased by .85cts and as a result the wholesale price of a bun was increased by .10 cts by the producer. Prior to this, the wholesale price of a bun was .90 cts, and the retail price was Rs.1.00, which gave a profit margin of .10 cts to the retailer. But after the wholesale price of buns increased by .10 cts the retail price of a bun went up to Rs.1.25, giving a profit margin of .25cts to the retailer.

The cost of labour is about 20% from the gross daily/monthly income of a bakery. Sometimes this can be a little higher in bakeries where all the workers are hired labourers. The labourers employed in bakeries fall into 3 categories, namely:

- a. Grade I labourers - who are responsible for production and quality control.

- b. grade II labourers, they are semi-skilled and assist the grade I labourer(s)
- c. grade III labourers - these people are unskilled and are employed as helpers and distributors of products.

The Government approved salaries for each of these categories are -

Grade I labourer (Bakers) - Rs.980 + 90 per month
 Grade II labourers (assist.)-Rs.915 + 90 per month
 Grade III labourers(helpers) -Rs.785 + 90 per month

However, this salary structure does not operate in reality and instead a fixed amount is paid to the Grade I labourers for each batch they produced (normally two batches are produced per day). This amount varies from area to area but generally a sum of Rs.75/- is paid for one batch. While the Assistants and helpers are paid a monthly salary which is lower^{Rs. 750/-} the approved amounts^{Rs. 980/-} by the government. The salary of an assistant is Rs.750/- and that of an helper is Rs.650/- with food and lodgings.

Almost all the labourers are recruited on a casual basis and consequently they are not entitled for any other benefits like bonus, Employees' Provident Fund, etc. As a result of this the rate of turnover of labourers is very high.

Distribution

Distribution of bakery products is a very competitive enterprise. Unless high quality products (for urban market) and an established market network exists, it is difficult to run a bakery under this competitive situation. In establishing a promising market network, especially in rural areas, the producer must be able to maintain a regular supply of products and to manipulate various friendships, kinships and caste relationships.

The existing trade agreement for baker products between producers and retailers is always not for the favour of the producer. According to this agreement the producer disposes his products at the retailers' shop on an agreed price(s) and the producer collects his money in the evening or on the following day. The retailer has a right to return the products that were not sold and the producer must bear the loss. This loss is considerable for some bakeries where the volume of production is small. The loss of returning the products in urban bakeries is about 2% and in rural bakeries 2-4%. However, those returned products are processed again and sold to those who are involved in the production of biscuits, etc.

The catchment area of a bakery is largely dependent of the quality of products and the way in which the producer manipulates his friendship and kinship network to establish a market. In urban areas, the catchment area of a bakery may be 5-10 hotels and groceries, but in rural areas it is about 5 villages or village hamlets.

Distribution is mainly done by bicycles but sometimes light vehicles are also used.

5. Pattern of fuel used

Wood fuel is the main source of energy for almost all the bakeries in Sri Lanka. When compared with the prices of electricity and diesel, wood fuel is still cheap and easily available. Three types of wood fuel are used in bakeries at present, they are:

- a. rubber wood 30%
- b. forest wood 50%
- c. wood available from home gardens 20%

Prices of fuel wood vary and prices fluctuate. In Colombo, Kalutara and Gampaha Districts (Western Province) the price of lorry load of rubberwood (equal to 6720 kgs) is Rs.3200/- including the transport cost. While in the Southern province the price of a lorry load of rubberwood is Rs.2,300/-. Similar to this, the prices of forest wood and wood gathered from homegardens also vary. For example, the price of a lorry load of forest wood in North Western province is Rs.950/-, but in the Western province it is Rs.3,500/-. Wood gathered from home gardens can also be very expensive and a lorry load may cost about Rs.3,000/-.

Fuelwood in the country can be shown as follows:

14 districts	forest wood
7 districts	rubber wood
4 districts	wood from home gardens

Accordingly, it is difficult to make a general statement about the fuel cost of 8 bakeries in different provinces. But if we calculate it regionwise and on the basis of existing prices of fuel wood, the cost of fuel for bread is as follows:

- western province	Rs.0.17 per loaf of bread
- southern province	Rs.0.13 - do -
- central province	Rs.0.15 - do -
- northwestern province	Rs.0.08 - do -

Note: prices of fuel wood gathered from these four provinces only.

In most of the bakeries visited for this study, two batches (one in the morning and one in the afternoon) are produced a day. The volume of the batch produced in the morning is comparatively larger than the batch produced in the afternoon. Therefore, more fuel wood is used for the morning batch.

6. Problems faced by Producers

A number of technical problems relating to the oven and the mixture was mentioned by the producers.

- a. heat does not last for long periods and consequently more than one firing is needed to produce a batch.
- b. the surface layer of the oven has to be repaired frequently.
- c. cracks in the oven - after a few years of use the walls of the oven start to crack.
- d. in the wet seasons, a large quantity of wood is needed to heat the oven.
- e. sometimes the baker faced great problems in preparing the dough.

Non-technical problems

- a. high turnover of labourers is a critical problem facing many of the producers.
- b. the existing trade agreement between producers and retailers is very disadvantageous to the producers.

7. Areas to be further investigated

The possibilities of following areas to be further investigated in order to make the bakeries enterprise profitable.

- a. improve the efficiency of existing ovens.
- b. devise low-cost fuel efficient ovens for poor people.
- c. devise a low-cost machine to prepare the dough.
- d. training facilities for bakers.

- e. to introduce non-traditional affordable bakery products to rural areas.
- f. to make bakery products from local grains.
- g. introduce low-cost/ alternative energy sources.
- h. improve management skills of producers.

ANNEXE I

Two Case Studies

a. A story of a success (project) enterprise.

Mr. Sirisens is an owner of a middle size bakery in the southern part of the country. His father too was involved in this enterprise since long ago but he was not successful due to bad management of the business and as a result the bakery was closed down and the premises used for doing a grocery business. After the death of the father, Mr. Sirisena started the bakery again in 1978 with a loan (Rs.5,000/-) obtained from a money lender. As the oven and the kneading room were in good condition the investment required was little. To start the production, a baker and a helper were recruited and Sirisena himself worked with them as an assistant.

At the beginning the volume of production was very little, 150 loaves of bread, 50 buns and 75 roast bread loaves per day. Although this volume was not enough to make a profit, it was just sufficient to cover the cost of production. It was not possible to increase the volume of production in a short period of time because of the competition from other producers and the existing system of selling on credit to the retailers. From 1978 to 1980 he was struggling to establish a market network for his products. In the meantime, he had a problem in getting fuel wood and raw materials (flour and sugar) on time. To overcome this latter problem he applied for a bank loan of Rs.15,000/- to enable him to stock raw materials and fuel wood. This was a good starting point for Mr. Sirisena because this enabled him to do a regular supply. But he was still unable to establish a promising network of retail outlets to dispose his products. As a result a lot of time had to be devoted to approach retailers in nearby villages through his friends and kinsmen. Similarly, more favourable sales commissions had to be offered to retailers who were identified. At the beginning a period of one week was given to the retailers to pay back the money. The result of this attempt was very successful and he was able to establish 8 new retail outlets within a radius of 3 miles of his business, covering 7 villages.

After he established these marketing networks the volume of production gradually increased by utilizing the full capacity of the oven. Mr. Sirisena himself was involved in the supervision, distribution and management.

Until 1984 he was not able to increase the number of items produced although the volume of (previous) product(ion)s increased. During this critical period the quality and weight of the products were closely supervised and as a result the items returned by the retailers were kept at a minimum.

Since 1985 the sales increased considerably as a result of hard work (15 hours a day), quality production, regular supply and better management. Up to this period his profit was about Rs.2000/- per month.

When Sirisena himself was convinced that he can compete with other producers in the existing market, he advised the baker to reduce the weight of the items, but to increase the quality of the product. This method was very effective because none of the customers bothered about the weight but the quality.

By the end of 1986 he was able to settle all the debts to the bank and to the money lenders. Similarly, a strong marketing network was established for all his products.

The present volume of production per day in his bakery is as follows:

Item	Volume	Profit per day (Rs.)
Bread	1320	198.00
Buns	400	100.00
Toast Bread	800	200.00
Biscuits	1000	<u>50.00</u>
		<u>548.00</u>

Note: in this calculation of profit, the cost of depreciation, cost of distribution and the cost of labour of Mr. Sirisena were not taken into account.

The number of labourers working in the bakery at present is 4 in addition to Mr. Sirisena. Of them two are bakers and the other two are helpers. The bakers are paid Rs.45/- each per batch. Helpers are paid a monthly salary of Rs.750/- with meals and lodgings. Mr. Sirisena himself does the distribution (by van), supervision and management. He treated his labour well and always kept them happy.

The oven is still in good condition although it is 30 years old. Once a year the oven is repaired and this costs about Rs.750/-.

Mr. Siisena always keeps a stock of flour, sugar and fuel wood which is sufficient for 3 weeks. The average value of this stock is Rs.45,000/-.

b. **A Story of an unsuccessful bakery project**

In 1970 Mr. Peter started a bakery project in a rural village of the central province of Sri Lanka. Before he started this project he had another bakery in operation in the southern province of the country. But due to certain reasons he had to close this down. Thereafter, Mr. Peter came to the above village and he decided to start a bakery there. All the useable equipment from the former bakery project was brought to the new one in order to reduce the cost of investment. However, an initial investment of Rs.19,000/- had to be borne by him for construction, purchase of additional equipment and raw material, etc. The capacity of this bakery was 18 trays.

The village where he started the project was agricultural and had a demand for bread rather than other sweet products.

The social environment was not, however, good enough for him because the villagers believed that people from outside, especially from down south, are strangers. Mr. Peter did not worry about this as he was already married to a girl from this village. Considering the situation, Mr. Peter decided not to recruit labourers from outside the village although there was nobody in the village who had the required skill. He recruited one of his brothers-in-law as an assistant and an unemployed youth as a helper.

Necessary fuel wood he bought from the village and he bought other raw material from the nearest town which was 9 miles away from the village. In transporting the raw materials he had no problem as there was a regular lorry service between the village and the town which operated to transport vegetables of the villagers to the town.

There was no bakery running in this village before Mr. Peter came but bread and other sweet dough products were distributed to the village by a bakery which was situated 4 miles away from the village. The problem of this producer was that his bicycle came to the village very late and therefore, the villagers could not buy the products before noon.

The seven small tea boutiques and the two groceries were targeted retailer market outlets for Mr. Peter's products.

At the beginning his volume of production was 200 loaves of bread, 100 buns, 50 toasted loaves of bread per day. At this moment it was not profitable to produce two batches a day because the market was not large enough.

It was also risky to increase the volume of production because the former producer continuously distributed his products in the village.

The price, quality and weight of the products which Peter produced were the same as other producer.

During the first 4 year period Mr. Peter was very successful. The production as well as the demand increased considerably.

This was not due to personal efficiency but due to government food policy. In this period the import of rice, flour and other food stuffs drastically reduced and flour was only distributed to registered bakeries and co-operative shops. Therefore, this was a good incentive for Mr. Peter to increase the production. The former producer also stopped his distribution in this area as his quota of flour was not sufficient to cater to a large catchment area.

This opportunity was badly utilised by Peter because he reduced the quality and weight of his products. The number of loaves of bread produced a day was also limited because he increased the volume of sweet dough production.

However, this method of increasing the profit margin did not last a long period. In 1977 the new Government that came into power lifted the import restrictions of rice and flour and consequently flour was freely available. The other producer then re-started his distribution in the area. The products distributed by him were good in quality and taste, and therefore, he could compete with Peter without much effort.

People also preferred the former producer as he was a person from the same area and he had kinship relationships with many people in the village and surrounding area.

Together with poor quality and the competition of the other producer, Peter was unable to protect his market. By the year 1980 he had only three tea boutiques to dispose the products. The volume of production was 50 loaves of bread 25 buns and 50 toasted loaves of bread per day. The profit he gained from this volume of production was just enough to cover the daily expenses of his family. As a result the services of labourers had to be stopped.

Thereafter, Mr. Peter himself did production and distribution, in addition to the purchasing of raw materials. These tasks, however, were impossible for one man to perform as the work load was too much. He was struggling to do this over a period of 4 months and ultimately he failed. He then wound-up his business in 1981 by leasing out the bakery to a person from that area.

The lessons we can learn from this story are:

- a. the catchment area of a bakery must be large enough.
- b. the producer must be able to supply what the people want. In this case it was bread.
- c. the quality should be of an acceptable standard.
- d. the minimum labour required for a small bakery is two persons.
- e. In rural areas the producer must preferably be a person from the same area.

Ranaweera Banda

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